

Book of Abstracts

11th Qualitative and Quantitative Methods in Libraries

QQML 2019

International Conference



Editor

Anthi Katsirikou

May 28-31, 2019

European University Institute

Florence, Italy

Imprint

**Book of Abstracts of the 11th Qualitative and Quantitative Methods in Libraries
International Conference (European University Institute, Florence, Italy: May 28-31,
2019)**

ISAST: International Society for the Advancement of Science and Technology.

1st ed.

Editor: Anthi Katsirikou

Database Design and Implementation: Ageliki Oikonomou and Aristeidis Meletiou

Book ISBN:

© Copyright 2019 by ISAST: International Society for the Advancement of Science and Technology.

All rights reserved. No part of this publication may be reproduced, stored, retrieved or transmitted, in any form or by any means, without the written permission of the publisher, nor be otherwise circulated in any form of binding or cover.

Printed in Athens, Greece

Conference Venue

European University Institute

Badia Fiesolana

Via dei Roccettini 9,

I-50014 San Domenico di Fiesole (FI) - Italy

Tel. [+39] 055 4685 399, Monday-Friday 8.00-19.00

Gold Sponsor

SPRINGER NATURE

Silver Sponsor



Organizing Committee

Anthi Katsirikou, University of Piraeus, Co-Chair

Aristeidis Meletiou, Director-General for Infrastructure, Informatics and Communications, Hellenic Republic, Ministry of Finance, General Secretariat for Information Systems

Antonis Mourikis, Athens University of Economics and Business

Ageliki Oikonomou, University of Piraeus

Christos H. Skiadas, ManLab, Technical University of Crete, Co-Chair

Iro Tzorbatzaki, University of Macedonia

Local Organizing Committee

Josep Torn, Director

Carlotta Alpigiano

Pernille Kjeldsen

Alba Parrini

Federica Signoriello

Volunteer

Chiara Lamioni, Italy

Preface

Dear our Guests,

It is our great pleasure to welcome all of you in Florence.

We are also happy to celebrate the 11th Anniversary of the QQML International Conference with you.

I hope your stay in Florence will be inspiring and effective.

As the previous years, a considerable number of high quality abstracts are accepted for oral or poster presentations and both research papers and applied works from all over the world are included in the program.

Important speakers present their research and their work in the Plenary Speeches, the Workshops, the Special Sessions and the Posters which support the professional development of library scientists and information specialists and enhance the research on the Library and Information Science.

Delegates from 62 countries participate here: Algeria, Armenia, Australia, Austria, Bangladesh, Belarus, Belgium, Brazil, Bulgaria, Canada, Chile, Croatia, Cuba, Czech Republic, Denmark, Estonia, Finland, France, Germany, Ghana, Greece, Hungary, India, Iran, Ireland, Italy, Japan, Jordan, Kazakhstan, Lithuania, Malaysia, Mexico, Nigeria, Norway, Oman, P. R. China, Pakistan, Palestine, Philippines, Poland, Portugal, Qatar, Republic of Moldova, Romania, Russian Federation, Saudi Arabia, Serbia, Singapore, Slovenia, South Africa, Spain, Sri Lanka, Sultanate of Oman, Sweden, Taiwan, The Netherlands, Trinidad and Tobago, U. S. Virgin Islands, Uganda, UK, United Arab Emirates, USA.

The 11th Conference brings together researchers, technical developers, managers and library professionals to review achievements to announce creative challenges and opportunities.

The conference also brings together members of the QQML network that started some years before and constructed its 1st Board last year.

I should like to encourage you to network with your QQML colleagues; which illustrates the distribution of the participants in the five geographic regions of the world.

I'd like to thank the Committees of the Conference which worked hard for its success.

The Conference is both social and scientific event, creates human networks and social affairs.

Enjoy it!

Anthi Katsirikou

University of Piraeus Library, Conference Chair

Conference Committees

QQML Scientific Board from the Elections of last December 2017

Luiza Margarida Gehl da Fonseca Bastos Baptista

Anthi Katsirikou

Markku A. Laitinen

Maria Musoke

Petruša Miholič

Advisory Committee

Prof. Carla Basili, National Council of Research, Italy

Albert K. Boekhorst, Universiteit van Amsterdam, Media Studies, Netherlands,
University of Pretoria, Dept. Information Science, South Africa

Prof. George Bokos, Ionian University, Greece

Prof. Joumana Boustany, Université Paris Est Marne-la-Vallée, France

Dr. Alison Brettell, Associate, Editor Evidence Based Library and Information
Practice

Jerald Cavanagh, Institute Librarian, Limerick Institute of Technology, Limerick,
Republic of Ireland

Dr. Colleen Cook, Trenholme Dean of Libraries, McGill University, Montreal,
Quebec Canada

Prof. Peter Herson, Simmons College, USA

Dr. Anthi Katsirikou, University of Piraeus Library Director, Greece

Prof. Kenneth-Roy Bonin, Carleton University, Canada

Padraig Kirby, Acting Senior Library Assistant, Limerick Institute of Technology,
Limerick, Republic of Ireland

Dr. Martha Kyrillidou, Consultant, Research Associate at the University of Illinois,
Instructor at Kent State University, USA

Dr. Aristeidis Meletiou, Technical University of Crete, Greece

Prof. Maria G. N. Musoke, Kyambogo University, Uganda

Prof. Lynne M. Rudasill, University of Illinois at Urbana-Champaign, USA

Prof. Christos Skiadas, Technical University of Crete, Greece

Dr. Bruce Thompson, Texas A&M University, USA

Prof. Sirje Virkus, Tallinn University, Estonia

Dr. Sohair Wastawy, Dean of Libraries, Florida Institute of Technology, USA

Prof. Teresa Welsh, The University of Southern Mississippi, USA

International Scientific Committee

Radia Bernaoui (ENSV, Algeria)

Svanhild Aabo (Oslo University College, Norway)

Noa Aharony (Bar-Ilan University, Israel)

Melita Ambrozic (NUK Ljubliana, Slovenia)
Tatjana Aparac (University J.J.Strossmayer in Osijek, Croatia)
Nada Arbutina (Belgrade City Library, Serbia)
Agnes Hajdu Barat (University of Szeged, Association of Hungarian Librarians, Hungary)
Carla Basili (Consiglio Nazionale delle Ricerche, Istituto Ceris, Roma, Italy)
Albert K. Boekhorst (Universiteit van Amsterdam, Media Studies, Netherlands, University of Pretoria, Dept. Information Science, South Africa)
George Bokos (Ionian University, Greece)
Joumana Boustany (Université Paris Descartes, France)
Alison Brettle (Associate Editor, Evidence Based Library and Information Practice)
Vesna Brujic-Okretic (City University, London, UK)
Stella Chatzemari (Technological Educational Institute, Greece)
Barbara Coelho Neves (Federal University of Bahia, Library of the Bahia Letters Academy, Brazil)
Jenny Craven (CERLIM, Joint editor LWW conference series)
Kathy Dempsey (Computers in Libraries, Editor, USA)
Raf Dekeyser (Katholieke Universiteit Leuven, Belgium)
Corrado Di Tillio (Comune di Roma – Istituzione Biblioteche, Biblioteca Raffaello, Roma, Italy)
P. Dukic (Belgrade City Library, Serbia)
Blazej Feret (Technical University of Lodz, Library, Poland)
Norbert Fuhr (Dep. of Computational and Cognitive Sciences, University of Duisburg-Essen, Germany)
George Giannakopoulos (Library and Information Systems Dept., TEI of Athens, Greece)
Lindsay Glynn (Evidence Based Library and Information Practice Journal, University of Alberta, Canada)
Jillian Griffiths (CERLIM, Manchester Metropolitan University, UK)
Herbert Gruttemeier (INIST-CNRS, President, ICSTI, France)
Dinesh K. Gupta (Dept. of Lib. & Inf. Sc., Vardhaman Mahaveer Open University, India)
Gaby Haddow (Curtin University, Dept. of Information Studies, School of Media, Culture & Creative Arts, Australia)
Peter Hernon (Graduate School of Library and Information Science, Simmons College, USA, Co-editor, Library and Information Science Research)
Frank Huysmans (University of Amsterdam, NL)
Jim Jansen (The Pennsylvania State University, USA)
Ian M. Johnson (Aberdeen Business School, The Robert Gordon University, UK)
Stanka Jovicic (Belgrade City Library, Serbia)
Sarantos Kapidakis (Ionian University, Greece)
Sanjay Kataria (Jaypee Institute of Information Technology, India)
Anthi Katsirikou (University of Piraeus, Greece), Co-Chair
Kenneth-Roy Bonin (Carleton University, Canada)
Christie Koontz (Florida State University, School of Library and Information, USA)
Marian Koren (Netherlands Public Library Association, Head of RIA, NL)

Serap Kurbanoglu (Hacettepe University, Dept. of Information Management, Turkey)
Markku Laitinen (The National Library of Finland, Finland)
Steen Bille Larsen (The Royal Library, Denmark)
Jesus Lau (Universidad Veracruzana, Mexico)
Airá Lepik (Institute of Information Studies Tallinn University, Estonia)
Sue McKnight (Nottingham Trent University, Nottingham, UK)
Sona Makulova (Comenius University, Slovakia)
Aristeidis Meletiou (Technical University of Crete, Greece)
Miholič Petruša (University of Primorska Slovenia)
Mersini Moreleli-Cacouris (Alexander Technological Educational Institution of Thessaloniki, Dept. of Librarianship & Information Systems, Greece)
Maria G. N. Musoke (Kyambogo University, Uganda)
Haruki Nagata (Rikkyo University, Japan)
Paul Nieuwenhuysen (Vrije Universiteit Brussel, Belgium)
Nor Edzan Che Nasir (University of Malaya, Kuala Lumpur, Malaysia)
Steve O'Connor (The Hong Kong Polytechnic University, Editor: Library Management, Library Management, China)
Cristina Pattuelli (Pratt Institute, New York, USA)
Aldo Pirola (Public Library System in Milan, Italian Librarian Association, EBLIDA, Italy)
Diana Pietruch-Reizes (The Polish Society of Information Science, Jagiellonian University, Poland)
Roswitha Poll (Munster University, Germany)
Maria Próchnicka (Jagiellonian University, Poland)
Angela Repanovici (Transilvania University of Brasov, Romania)
Blanca Rodriguez Bravo (Universidad de Leon, Spain)
Ronald Rousseau (ISSI, Belgium)
Lynne M. Rudasill (University of Illinois at Urbana-Champaign, USA)
Anabela Mesquita Teixeira Sarmiento (ISCAP, School of Accountancy and Administration of Porto, Portugal)
Egbert J. Sanchez Vanderkast (National Autonomous University of Mexico, Mexico)
Juran Krishna Sarkhel (University of Kalyani, India)
Laura Saunders (Simmons College Graduate School of Library and Information Science, USA)
René Schneider (Haute Ecole de gestion, Switzerland)
D. K. Singh (Banaras Hindu University, India)
Christos H. Skiadas (Technical University of Crete, Greece), Co-Chair
Amanda Spink (Queensland University of Technology, Australia)
Gordana Stokic Simoncic (University of Beograd, Serbia)
Ruth Tammeorg (Tartu University Library, Estonia)
Rong Tang (Director, Simmons GSLIS Usability Lab, Graduate School of Library and Information Science, Simmons College, Boston, MA, USA)
Carol Tenopir (University of Tennessee, School of Information Sciences, USA)
Ana Lucia Terra (Oporto Polytechnic Institute, School of Industrial Studies and Management, Portugal)
Thordis T. Thorarinsdottir (Menntaskolinn vid Sund/University of Iceland)

Tania Todorova (State University of Library Studies and Information Technology, Bulgaria)

Christine Urquhart (Aberystwyth University, Dept. of Information Studies, UK)

Beatriz Valadares Cendón (School of Information Science, Federal University of Minas Gerais, Brazil)

Sirje Virkus (Tallinn University, Estonia)

Sohair Wastawy (Dean of Libraries, Florida Institute of Technology, USA)

Sheila Webber (University of Sheffield, UK)

Teresa Welsh (The University of Southern Mississippi, USA)

Bülent Yılmaz (Hacettepe University, Turkey)

Aleksander Zgrzywa (Wroclaw University of Technology, Poland)

Plenary Talks

The Challenge of Imagining a New National Library

Dr. Sohair Wastawy

Executive Director Qatar National Library, Qatar

Abstract: The role of the library in our society continues to evolve. The evolution of public and academic libraries is often discussed, but the changing role of the national library is also crucial to recognize. While a national library's primary function lies largely in preserving the nation's intellectual and cultural output, many have been offering users limited browsing collections, and offering associated public library functions. Today, we see many offer a new array of services, gradually allowing for their transformation into entities far more vital than store houses for national collections. The new Qatar National Library is a case in point -it was built to perform the national function but also act as a public and research library. This presentation will illustrate how these functions interact and enrich the nation and its citizens. It will also speak of the challenges of escaping old ways of thinking and creating new ones and how technology, while providing tremendous opportunities, can also present substantial institutional and social challenges. It will discuss the ways the Library is expanding the notion of literacy and stakeholders' mindsets.

Brief Biography: *Dr. Wastawy was appointed as the Executive Director of Qatar National Library in October 2016. Before arriving to Qatar, Dr. Wastawy was the Dean of Libraries at Florida Institute of Technology in Florida, USA. She also served as the Dean of the University Libraries at Illinois State University. From 2004 to 2010, Dr. Wastawy provided leadership for a full range of library and cultural activities as the first chief librarian of the new Library of Alexandria in Egypt where she was instrumental in founding and building the programs the Library of Alexandria offers today. From 1992 to 2004 Dr. Wastawy was the Dean of Libraries at Illinois Institute of Technology (IIT) and was affiliated with IIT since 1988 where she was as a researcher and library director for the Center of the Study of Professional Ethics until 1992. Prior to her work with IIT, Dr. Wastawy worked as a lecturer in Saudi Arabia and Egypt, respectively. Dr. Wastawy serves as member of professional associations boards and is the recipient of many awards and honors including a Fulbright scholarship. She is also an international consultant for library buildings and management. Dr. Wastawy received her BA, MA, and completed work towards her Ph.D. thesis in Linguistics at Cairo University, Egypt. She possesses a Master's degree in Library and Information Science from The Catholic University of America, Washington DC, USA and a Doctorate degree in Library and Information Management from Simmons College, USA.*

International Perspectives on Library and Information Science Research Methodology: Trends and Practices for the Profession

Anna Maria Tamaro

PhD, Editor in Chief of Digital Library Perspectives

Abstract: The international perspective about LIS research trends started with articles by Järvelin and Vakkari (1990; 1993). The Section of Library Theory and Research of IFLA after this first research initiated a series of national studies analyzing differences in LIS research between countries. The IFLA LTR Section has also developed projects and tools that help professionals to do research. Many librarians and information professionals have now a double role with respect to research: they conduct their own research or participate as part of a research group and advise other researchers on achieving the impact of research. Facing the need to respond to the expectations of changing society that professionals strive to serve, this presentation aims to develop a new understanding of the core values of LIS research methodology.

Brief Biography: *Anna Maria Tamaro has been teaching in the International Master in Digital Library Learning (DILL), joint international Master of Tallinn University and University of Parma and before in the International Master Information Studies with Northumbria University. Strongly convinced of the internationalization of the profession, she is active in IFLA and ASIS&T: she is the Past Chair of the IFLA Section Library Theory and Research (LTR) and Treasure of ASIS&T SIG Education for Information Science. She is currently the Editor in Chief of Digital Library Perspectives and Editor of the Column Digital Heritage in International Information and Library Review. Main interests in research are: Internationalisation of LIS education, Digital library, Data curation.*

Data Science, Machine Learning, Knowledge Organization and Digital Humanities: Some Reflections on the Fields of Knowledge

Dr. Renato Rocha Souza

Federal University of Minas Gerais Fundação Getulio Vargas, Brazil & Österreichische Akademie der Wissenschaften

Abstract: Data Science has been described as an interdisciplinary field of scientific methods, processes, algorithms and systems to extract knowledge or insights from data in various forms, either structured or unstructured. Just like Information Science revolutionized Knowledge Organization in the 1960s, this field has arisen to provide theoretical, methodological and practical tools to study and deal with information needs; and both are very dependent on technological constructs. The aim of this talk is to discuss the points of convergence of the two fields and the challenges and opportunities that Data Driven Science can bring to the Informational Tasks within the Digital Humanities.

Brief Biography: After graduating and completing his masters on Engineering, developed his doctorate and post doctorate in Information Science and Computer Science, dealing with the topics of Information Retrieval, Natural Language Processing and Knowledge Organization Systems, as thesaurus and ontologies. Has been working in the past ten years with Scientific Programming, Data Science and Machine Learning/Deep Learning, as a professor and researcher in the Applied Mathematics School at Fundação Getulio Vargas, Rio de Janeiro, and in School of Information Science, in the Federal University of Minas Gerais. Has been developing projects in the domains of Political Science, Law, Economics, Public Health and Education; integrating information resources in analytical pipelines.

Works nowadays as a researcher in the Austrian Centre for Digital Humanities, in the Austrian Academy of Sciences, exploring the possibilities of Natural Language Processing, Automatic Classification, Text Mining and Machine Learning aiding Digital Humanities and Citizen Science projects.

Workshops

1. Library Strategies: Evidence for Going Forward? A Workshop

Bertil F. Dorch, Library Director, SDU, Denmark, **Lotta Svantesson**, EUI Repository Manager / OA coordinator, EUI Library, Florence, Italy, **Pep Torn**, Director, EUI Library, Florence, Italy, **Charlotte Wien**, Professor, SDU, Denmark

Abstract: Research libraries find themselves in turbulent times. The changing winds of research policy, digitalization, increasing license fees, the Open Science movement, changes in student behavior and many other factors appear to be in a state of flux. During such turbulent times means of maneuvering and nautical markers are of extreme importance to both management and staff.

Unless a research library can define where it wants to be, and what it wants to do in the future, there is a danger that the annual plans are created from view of the rear mirror—or rather ‘what we did last year’.

A library strategy is a series of markers for the organization and a well-drafted one creates a higher level of focus on which activities that will lead to success and which ones that will not, and it will help the library prioritize its resources and guide competence development.

Many European research libraries are fully aware of the importance of having a well-defined strategy. Others rely on the strategy set by their mother institution and others are in the process of seeking inspiration for their next or their new strategy. With this workshop we wish to raise awareness and also to open up for a discussion of how success or failure can be measured. We hope that such discussion will touch upon international standards used (or the need for such standards) and possibly lead to proposals for new international standards and performance indicators. The aim should be to propose these standards as tools so as to better measure success and failure and therefore to help in giving the directions for the future.

Our workshop will welcome them all and hopefully give every participant a set of relevant takeaways.

During the workshop we wish to discuss library strategies from several perspectives. First, we will present a small comparative study of 4-6 selected European research libraries. We will seek similarities in the mission and vision statements and attempt to identify overall trends in research library strategies. Secondly, two library directors from very different institutions will present their thoughts and experiences with the strategic processes. These presentations will be followed by a discussion with the workshop participants. Finally, the panelists will present an overview of the most important elements and points that should be addressed by any library developing a strategy.

Target audience: Library professionals and managers

Number of participants: Guestimate 15-25

No special equipment required.

Timeslot: approximately 1,5 hours

2. Information Search & Discovery, Using an Image as Query: A Workshop

Paul Nieuwenhuysen, University Library, Vrije Universiteit Brussel, Brussels, Belgium

Abstract:

Introduction: This tutorial workshop is based on a continuing investigation of the power, applicability, usefulness and limitations of search by image through the Internet / WWW.

Background and purpose: In this relatively new method for information retrieval, a query does not consist of text but of an image file. The search results lead to images on the WWW and to related documents. Google offers this WWW search method as “Reverse image search(ing)”

Other terms used for this method are

- Search(ing) by example
- Reverse image lookup = RIL
- Backwards image search(ing)
- Inside search(ing)
- Content-based information retrieval = CBIR

Furthermore, a search query can also consist of a combination of an image with text.

Topics:

1. Several online services are available free of charge to search by image.
2. Differences among these services are substantial.
3. Google can reveal images present on the Internet, which are duplicate/copies of the query/source image. The success is quite variable from case to case.
4. This recall performance is strongly correlated with the performance of a more classical Google search by text to find copies of the query/source image file on the Internet.
5. Reverse image search as offered by Google can even reveal images that are modified versions of the query / source image; more specifically, modified versions can differ from the source image in size and in colours. The system can also reveal a fragment and even a modified / edited fragment of the source image, when this is included in an image present on the internet.
6. Three services to reveal copies of an image on the Internet / WWW have been compared. The outcomes have demonstrated that this type a searching can not only reveal images in simple classical formats such as jpeg / jpg and ping / png, but even to copies of the query image that are embedded in a more complicated file such as a PDF or set of slides.

Furthermore, this investigation has led to a ranking for the number of copies found, and to the same ranking for the precision of the search results, as follows:

- Google, the well know general web search system
 - Yandex, the general web search system that is popular mainly in Russia
 - TinEye, the pioneering system that is dedicated to search by image only
7. Our tests have demonstrated that since 2014 Google reverse image search can not only find images that are visually similar to the query / source image, but can even retrieve images that are semantically similar / related to the query / source image, while they have no elements in common the query image. The search results may also include

a description of the subject of the image, and this can of course be interesting if the user has not yet much knowledge about the subject, so that using a specific text query becomes possible. Furthermore, other information related to the image and relevant links may also be included in the search results.

8. The performance of search by image to find images that are semantically similar to the query/source image is improving.

9. Not only pure, simple search either with words or with a source image is possible by the freely available search system offered by Google, but a search query can also consist of a combination of an image with words. This allows us to combine the strengths of more classical text retrieval with the more recent search by image. Our tests have shown that this allows us to obtain search results with a precision that is higher than when only one of both search methods is used.

10. The progress described above in automatic analysis of images to determine some of their contents / meaning / semantics is also reflected by the improvements in automatic categorization / classification of images based on their contents. A popular example of such a system that is freely accessible and usable is Google Photos at <https://photos.google.com/>

11. Recently, search by image is applied \ not only by systems that are primarily search services, but also by systems in which images are important. An example is Pinterest that allow users to collect or “pin” images in virtual, digital, so-called pin boards. Our recent comparison of Google with Pinterest shows that Pinterest has become an additional and even competing system that allows us to start from a selected source image to find related, relevant images; furthermore, any of these found relevant images may lead to information that is relate to the selected source image.

Various applications can be shown:

- Starting from an image that you created or that is affiliated with your organization, you may find copies / duplicates or even modified versions on the WWW. This can reveal copyright infringements. In a more positive way, this allows to assess the impact of such images on a worldwide audience. For example: Curators or owners of a collection of objects can assess the impact and reuse of photos of the physical objects in their collection, on a worldwide scale.
- Starting from some interesting image that you have not created, but that you consider as interesting, and that is perhaps not the original version and for which the creator/author is not indicated, you may find other and better versions that are more suitable for your application and need. Also you may find the author(s) on the WWW, which can be useful to obtain more information or to discuss possible copyright linked to the image.
- Also searching by image may allow us to discover that the image that illustrates and supports a document is NOT real / authentic, but that is has been copied from another site, from another context and perhaps that it has even been modified /changed / doctored, to support the text, the claims of the author of the document.
- Starting from some interesting source image, you may find semantically related images; in other words, you may discover images with a subject that is related to the subject of that source image. Furthermore, including some text in the query may increase the precision of the results, even when not enough knowledge is available in advance, so that only one or a few unspecific search words can be used.

- Consider the scenario in which you have already sufficient information/knowledge in advance to formulate and submit a classical, textual, specific, focused search query; even then, including an image to the text query can be useful to increase the precision of the results.
- Furthermore, in each of these applications, you may also find related text information.

Recommendations:

The growing success of the search methods that include an image in the query to find relevant information leads us to a few recommendations:

1. To find relevant information, these recent, additional search methods should be considered besides more classical methods, by librarians and information intermediaries in general, and also by end-users of information discovery systems.
2. As a consequence, search by image deserves a place in educational courses and tutorials on information and media literacy.
3. Authors and publishers in general want to create their publications and make these available in such a way that they rank high in the results of relevant search and discovery systems. Therefore it is good practice to take into account the workings of at least the classical, popular, search services, in the creation and optimization of their website(s). Not only the texts in a website should be considered, but also images, to optimize
 - for a relatively classical search with a text query to find images,
 - for a more recent search by image, or
 - for a search with a query that consists of text plus an image file.
4. More concretely, website developers should try to publish their meaningful images in such a way that these can be well harvested, analysed and included in the database index of relevant search systems in an effective way.

Conclusions:

Information discovery is enhanced by recent methods that involve images:

- Search by image is evolving to a powerful, additional method to tackle information needs that are difficult to handle with more classical methods.
- Information discovery is assisted by automatic classification of images and by recommendation services based on image similarities.
- Furthermore, using a combination of text with an image in a search query can increase the precision of the search results, in comparison with a more classical pure text search or with a pure search by image.

Goals and learning objectives: Participant learn about state-of-the-art applications and limitations of reverse image search on the internet and WWW. So they will be motivated and enable to apply this relatively new method to discover information and to support other potential users.

Format and method: This workshop can be organized and offered as a lecture illustrated with practical examples. Interactions with the participants can make the lecture more dynamic. The workshop can include some time for practical tests and applications, if the participant has access to a computer and internet.

The target audience: No restrictions. For everyone interested in the topic.

Time: 3 hours, including applications by the participants.

Keywords: search by image, reverse image searching, Internet, WWW, search systems, search services, TinEye, Google, Yandex, precision, semantic gap

References

- Marques, Oge (2016) Visual Information Retrieval: The State of the Art. IT Professional, Volume: 18, Issue: 4, DOI: 10.1109/MITP.2016.70 (accessed in 2016).
Nieuwenhuysen, Paul (2013) Search by Image through the WWW: an Additional Tool for Information Retrieval.

Full text published in proceedings of the international conference on Asia-Pacific Library and Information Education and Practices = A-LIEP 2013

“Issues and challenges of the information professions in the digital age” held at Pullman Khon Kaen Raja Orchid Hotel, in Khon Kaen City, Isan, Thailand, 10-12 July 2013 [online]

<http://aliep2013.com/index.php/table-of-contents> <http://aliep2013.com/images/download/pdfs1/PaperNo41.pdf> and full text available also online free of charge from

https://www.researchgate.net/profile/Paul_Nieuwenhuysen/contributions Abstract published in printed

Abstract Book, 55 pp., on p. 38.

Nieuwenhuysen, Paul (2014) Search by image through the Internet: applications and limitations. In *Libraries in the Transition Era: New Space –New Services –New Experience*. The Proceedings of the Seventh Shanghai International Library Forum, organized by the Shanghai Library, in Shanghai Library, China, 9-11 July 2014 <http://www.libnet.sh.cn/silf2014/english/index.htm>

Shanghai: Shanghai Scientific and Technological Literature Press, <http://www.sstlp.com>, 476 pp, ISBN 978-7-5439-6289-7. pp. 145-155.

Nieuwenhuysen, Paul (2015) Search by image through the Internet: an additional method to find information. In *Transforming Libraries and Librarianship*, Delhi: KBD Publication, 502 pp. Edited by Sanjay Kataria, John Paul Anbu, Shri Ram, Nirmal Kumar Swain, Naresh Singh Bhandari, 2015, ISBN: 978-81-907999-6-6, pp. 179-194.

Nieuwenhuysen, Paul (2016) Information discovery on the Internet, using a search query that consists of text & an image. in A-LIEP 2016, proceedings of the 7th Asia-pacific Conference on Library and Information Education and Practice, in University of Nanjing, Nanjing = Nanking, Jiangsu province, China, Edited by Jianjun Sun, Qinghua Zhu, Christopher Khoo Shiyuan Ou.. <http://aliep2016.nju.edu.cn>, PDF file, pp. 99-112. Available free of charge from <http://aliep2016.nju.edu.cn/files/A-LIEP%202016%20Proceedings.pdf>

Nieuwenhuysen, P. (2017) Information discovery: A picture is worth a thousand words? In the proceedings of the International Conference on the Future of Libraries (ICFL), From Promises to Practice, Editor-in-chief M. Krishna Murthy, Editors B. Ramesha, B. Subhash Reddy, organized by DRTC = Documentation Research and Training Centre, Indian Statistical Institute, Bangalore @ ISI = Indian Statistical Institute in Bangalore = Bengaluru, Karnataka, India, 15-17 November 2017, Published by DRTC, Indian Statistical Institute, 2017, 602 pp., ISBN 978-81-92179-79-7, pp. 313-324.

https://www.researchgate.net/profile/Paul_Nieuwenhuysen/contributions

Nieuwenhuysen, P. (2018a) Information discovery based on the emerging technology to analyse digital images. In *Reshaping libraries: emerging global technologies and trends*. ICRL-2018. Papers of the First International Conference on Reshaping Libraries: Emerging Global Technologies and Trends organized jointly by DELNET-Developing Library Network, Ambedkar University Delhi in Association with the Society for Library Professionals (SLP) and Special Libraries Association (SLA, USA) Asian Chapter, February 1-3 at Jaipur, India. Chief Editor: H.K. Kaul, Editors P.K. Jain, Debal C. Kar, Sangeeta Kaul. Published by DELNET, New Delhi. ISBN 978-93-82735-13-7. 230 pp., pp. 1-14. & available from

https://www.researchgate.net/profile/Paul_Nieuwenhuysen/contributions & to be republished in the printed DELNET Newsletter in 2019.

Nieuwenhuysen, P. (2018b) Information Discovery and Images A Case Study of Google Photos. in: 5th International Symposium on Emerging Trends and Technologies in Libraries and Information Services (ETTLIS), in Noida, India, 21-23 Feb. 2018, INSPEC Accession Number: 18150464, DOI: 10.1109/ETTLIS.2018.8485238, Publisher: IEEE <https://ieeexplore.ieee.org/document/8485238>

Nieuwenhuysen, P. (2018c) Information discovery using search by image: a comparison of Google and Pinterest. In *The Proceedings of the 9th Shanghai International Library Forum = SILF 2018, Library for all: towards a smarter and inclusive society*, October 17-19, 2018, at the Shanghai Library, in Shanghai, China, 464 p., pp. 400-412, ISBN 978-7-5439-7748-8, <http://www.sstlp.com> & available from

https://www.researchgate.net/profile/Paul_Nieuwenhuysen/contributions Nieuwenhuysen, P. (2019) Finding copies of an image: a comparison of reverse image search systems on the WWW. Accepted for publication in the proceedings of the 14th International Conference on Webometrics, Informetrics and Scientometrics (WIS) & 19th COLLNET Meeting, at the University of Macau, Macau, 5 to 8 December 2018, <http://socio.org.uk/collnet2018/>

Thompson, S. and Reilly, M. (2017) “A picture is worth a thousand words”: Reverse image lookup and digital library assessment. *Journal of the Association for Information Science and Technology*, 68, pp. 2264–2266. doi:10.1002/asi.23847

3. Writing for Wellness Healing After Natural Disasters A Workshop

Marilyn M. Brissett, The Ralph M. Paiewonsky Library, University of the Virgin Islands

Abstract: Natural disasters are increasing in both frequency and cost. The emotional turmoil inflicted on disaster survivors cannot be estimated. It affects all aspects of a community and lengthens the recovery process. From Papua New Guinea to Guatemala, thousands of people lost their lives in 2018 to natural disasters. Earthquakes, tsunamis,

volcanic eruptions, floods and heat waves wreaked havoc across the globe. South America has already recorded the first billion-dollar disaster in 2019.

In 2017, the residents of the U.S. Virgin Islands were dazed and distraught after two hurricanes hit the islands within a two-week period. Businesses, homes, hospitals, post offices, and schools were destroyed. The economic and emotional loss felt by survivors, like that of disaster victims across the globe, can last for years. Intervention techniques, which incorporate writing, have been shown to improve the ability of disaster survivors to bounce back and regain control over their lives. This workshop provides participants with a writing program that can be implemented after basic needs have been met. Resources for early intervention strategies will be discussed and made available to participants, but are not the main focus of this workshop.

Writing helps heal the wounds and lessen the long term social impact that results following natural disasters. Libraries can encourage resilience in their communities by providing writing programs designed to enhance disaster victims' natural capacity to recover. Writing supports survivors efforts to begin the healing process and lessens negative behaviors, such as family violence and drug abuse, which often occur in the aftermath of disasters. Quite simply, writing stimulates recovery!

Participants can adapt the writing method presented in this workshop to meet the needs of both children and adults. A Writing for Wellness Program can be implemented at school, public and academic libraries. Writing allows authors of any age to express their feelings, concerns, misgivings, and doubts about what the future holds. It promotes healing and encourages participants to move forward with their lives. Additionally, it provides a venue for people to reconnect and avoid the negative consequences of social isolation.

The goal of this workshop is to provide participants with a pathway to support their communities in the event of a natural disaster. It provides the presenter with the opportunity to showcase the program and share the heartfelt stories of children who survived two Category 5 hurricanes. Participants will take part in activities and exercises designed to set-up and implement a post-disaster writing program. Live polling and crowdsourcing will be used to ensure that every participant contributes to the outcome. Small groups, through communication and cooperation, will create frameworks that can be adapted to their communities and libraries.

Libraries are more than books and banks of computers. Librarians take care of their patrons – unconditionally with kindness and impartiality. In the aftermath of a disaster, the value of libraries, and the support librarians provide to their communities, cannot be underestimated. Libraries help their communities begin the long process of recovery. Every disaster victim has a story and librarians can create programs to help them tell their story and begin the healing process.

Target Audience: Librarians – School, Public, and Academic

Time: Approximately 1.5 hrs.

Number of Participants: 25-30

Special Equipment: Smart Phone

Keywords: intervention techniques, libraries, librarians, natural disasters, resilience, storytelling, wellness, writing programs

4. Competitive Intelligence as a Method in Library Context

Sholeh Arastoopoor, PhD. in Knowledge and Information Science, Ferdowsi University of Mashhad, Iran, **Mahdi Zahedi Nooghabi**, Ph.D. in Knowledge and Information science, Iran

Abstract:

Scope

The primary scope of this workshop is an in-depth discussion and exchange of ideas related to the competitive intelligence (CI) and its potential relationship to the library context and any other information environment. The discussion will follow two paths:
1) the CI as a method used by libraries and information professionals and
2) The library/ information center acting as a CI itself.

Rationale of the workshop

- Libraries are always challenged by new mediums of information and therefore the number of the potential users of the libraries might decrease, if the library could not cope with the needs and requirements of the users.
- The CI could thus be regarded as a tool for determining library's rivals and plan for enhancing the library's impact on one hand.
- On the other hand, the CI cycle itself could be mapped on libraries objectives in an organization.
- Dramatic changes in our economy, due to the nature of current information age and information technology revolution, have led to a dynamic and unsustainable condition which makes libraries need competition analysis in order to survive and develop.

Topics

Part A: CI initiation in Libraries and other information centers

It is needless to say that information is always needed by human kind and if they don't come to the libraries, it is likely that they are satisfying their information needs through other ways and if this trend is not altered in near future libraries would face serious problems which might lead to their obsolescence.

- An Introduction to CI
- Gathering and validating CI data
- Analyzing the collected data
- Auctioning the data

Part B: Using CI to serve the library's parent organization

Libraries and information centers are cores of information management in their respective organizations and due to the fact that information professionals in these types of libraries and information centers aim at acting in service of the organization, the library could become a hub for providing any useful information (even the competitive information). To this end, information centers processes have so many similarities with CI units in their organizations.

- CI in organizations
- Libraries in different organizations
- Mapping CI on information/knowledge management
- What would be the requirements

Outcomes

The topic have long been discussed in literature yet this workshop enables the attendees to brainstorm on this matter, understanding I t(including Key Intelligence Topic and

etc.) and gives them an insight to applying the concept of CI in whichever way that suites their respective organization.

Another outcome of this workshop would be a list of to Do's and Don'ts in this regard which can be taken home as a handy reminder in initiating CI.

Target Audience

Specifically librarians and information professionals currently working in different departments of libraries, and also educators and lecturers specifically engaged in the field of Special Libraries are considered the main target audience of this workshop. Yet the workshop is open to students and those who are interested in incorporating the concept in LIS curriculum.

Required Equipment

Whiteboard; board markers; video projector; sticky notes in different colors.

5. Picture Analysis based on Erwin Panofsky's Iconology as a Method for Subject Indexing of Images using MaxQDA

Sholeh Arastoopoor, PhD. in Knowledge and Information Science, Ferdowsi University of Mashhad, Iran, **Mahdi Zahedi Nooghabi**, Ph.D. in Knowledge and Information Science

Scope

The primary scope of this three-hour workshop is to bring together Erwin Panofsky's multilayer analysis as a framework for subject analysis of images and MaxQDA as a tool for facilitating this process.

Rationale of the workshop

Image indexing and retrieval has long been an issue of interest among catalogers and information specialists. Although some systems have applied image-based retrieval strategies, there are still a lot of retrieval systems that rely on text based indexing of images. Thus different ideas and theoretical frameworks in this regard would be beneficial.

- Determining the aboutness of images have long been a debate among the professionals of information organization.
- Text-based image retrieval is still a major way in different databases. Yet the theoretical framework for suitable tagging and aboutness representation of images has always been a challenge for professionals in this field.
- Erwin Panofsky's Iconography could be regarded as an alternative framework for image description.

Topics

Part A: Use of Iconography in subject indexing of Images

- An Introduction to Iconology
- Aboutness and ofness in pictures
- Analyzing the images based on the theory
- Iconology ... to what extend?

Part B: Image analysis through MaxQDA

Outcomes

The outcomes of this workshop would be:

- Applying the iconology as a framework for subject indexing of images
- Having a better understanding of users' appreciation of aboutness and ofness
- Using MaxQDA as a tool that could be of help in this regard

Target Audience

The workshop is open to students, librarians, information professionals and those who are interested in incorporating iconography in the process of image description.

Required Equipment

Whiteboard; board markers; video projector; sticky notes in different colors.

The attendees are also encouraged to bring laptops with MaxQDA installed on them for the purpose of the second part of the workshop.

6. Research Opportunities in Systematic Methods: A Menu of Methods

Margaret J. Foster, MS,MPH, **Thomas D. Halling**, MLIS, **Susan Goodwin**, MLIS, University Libraries, Texas A&M University, USA

Abstract: Every year thousands of systematic reviews are published and that number continues to rise. There have also been many published studies on systematic review methods. As more disciplines are now applying systematic review methods than ever before, the need to study systematic methods within and beyond the healthcare field continues to grow. As information scientists, librarians have a the opportunity to play a unique role in the application of the systematic review method and to study various aspects of the methods.

This workshop will provide an overview to systematic methods and the need for further research. There are a wide variety options for librarians to lead on research projects to improve or discover new solutions in synthesis searching. Research opportunities include developing search filters, evaluating software, evaluating quality of reviews, creating best practices and more. For each opportunity, we will cover the method and examples of the method. Interaction will be provided through group and class discussions.

Outline of workshop

Introduction: Short lecture introducing systematic review methods and current state of research (10 minutes)

Part 1) Then an overview and examples of opportunities. (20 min)

- **Search filters:** Definition of filters, how to find current filters, development methods, evaluation and application
- **Software:** Types of software, methods of evaluation, and/or development of software
- **Quality of reviews:** Describe available standards, applying standards to evaluate the quality of a particular set of reviews, and other ways to research standards
- **Best practices:** There are several practices to consider: explore or evaluate searching grey literature and other resources, issues in applying systematic review methods in a particular field or research type, and data management concerns

- **Other opportunities:** There are several other types of projects including publication bias, collaboration issues, evidence based practices and reviews, and more

Part 2) Breakout groups: Participants will select one of the types of opportunities presented and form groups to brainstorm potential projects (30 minutes)

Part 3) Presentation: Groups will then present their ideas (20 minutes)

Conclusion: The workshop will end with a discussion for next steps to pursue a research project (10 min)

Outcomes:

At the end of the workshop, participants will be able to:

- Describe current issues in systematic review methods
- List types of systematic review research opportunities
- Develop a preliminary plan of how to continue working on a research project
-

Target audience:

The workshop is designed those interested in conducting research projects on systematic review methods. Participants do not need to be experts on systematic reviews.

Equipment required:

A projector to present the PowerPoint and a whiteboard with markers to help lead workshop discussions.

7. The Seven Virtues of the Librarian Services: An Application in Virtual Reality

María Guadalupe Venteño Jaramillo, DGB, Estefanía Cabrera Jaimes, DGPE, Víctor Hugo Franco Serrano, DGTIC, Mexico

Abstract: Show of the Virtual Reality Simulator: The Seven Virtues of the librarian services.

Ensuring the quality of librarian services has proven to be a challenging objective for the Dirección General de Bibliotecas. In order to achieve this, we have developed the Quality Library Services a training course. Along with the presential course, user will experience seven frequent situations that occur in the provision of the services in the libraries of SIBIUNAM, based on what has been learned in the training course, the librarian will decide how to deal with the situations that arise and depending on these decisions, the characters involved will have different outcomes.

The virtues that librarians must show when attending to users are empathy, interest, warmth, equality, personalized attention, understanding and assertiveness; these virtues are associated with each character shown in the simulator. We hope that showing our librarians that even a little change in their attitude towards the users can mean so much to them and raise awareness about their work's importance in benefit of our University.

Outline of workshop

Introduction: We present general information about to training and virtual reality (10 minutes)

Part 1) A video will be presented to describe the characters and service situations represented in the Virtual Library (15 minutes)

Part 2) After the video, the participants will be able to live the experience in virtual reality, there will be 3 simulators available (25 minutes)

When finalizing with comments (10 minutes)

Target audience: No restrictions. For everyone interested in the topic.

Learning objectives: To know the virtual library and training for librarians.

Required Equipment

We will bring 3 virtual reality headsets, each consisting of:

-Samsung Galaxy s8+ smartphones

-Samsung Gear VR (Headset and bluetooth controller).

For the presentation and video we need a visualization device (either digital monitor or projector, depending on our designed space), an audio output system and microphones.

Number of participants: 20

Time: 1 hour

Special Sessions

1. Quo Vadis eXtended Reality (XR) in Academic Libraries

Coordinator: Prof., Dr. Plamen Miltenoff, St. Cloud State University, USA

Scope & rationale: The variations of XR: Virtual Reality (VR), Augmented Reality (AR) and Mixed Reality (MR), are steadily establishing their place in education. The importance of the academic library for the XR adoption in education is manifold. The academic library can establish itself as the leader in the academic adoption of XR by creating campus makerspace / sandbox with activities for students across campus. The library also can be the curator of content creation with XR. Last but not least, the library is the gate keeper and archivist of new type of voluminous data for the XR content. The character and functions of the library and the librarians make them most suitable mediators between the budding XR movement and other promising endeavors, such as, e.g., Open Educational Resources, Big Data for libraries, etc. This Special Sessions seeks to explore the mechanisms and the processes around a very new educational trend, such as XR, discuss and shape directions for libraries and librarians on the path of XR development.

2. Experimental Data Analysis Applied in Library and Information Sciences

Organizer: **Veslava Osinska**, Nicolaus Copernicus University in Torun, Poland

Scope & rationale: The specialists of information are nowadays facing a challenge of processing the data. Using the modern methods of text analysis, supporting by visualization they can reveal the key patterns of scientific knowledge, current research trends as well as filter the most popular topics. The experience of information scientists can be particularly useful in communication design. Understanding of these processes is connected with psychology and neuroscience studies, that means a collaboration between librarians and cognitive scientists. Evolvement the designers into research become essential to develop library services and the interaction with readers. This needs to intensify eye-tracking research in library environment and broaden discussion. The session includes the issues of distinct experiments regarding to library environment:

- Natural Language Processing for library applications,
- cognitive processes and perception;
- UX of library services through eye-tracking,
- eye tracking in e-learning.

List of papers

1. **Veslava Osinska**, Eye-tracking Experiment Using Book Covers. Visual Data Analysis in Reference to Mind Space Mapping

2. **Adam Szalach**, The Study of Readability of Bibliographical Styles in Digital Environment Using Eye-tracking

3. **Linking Research and Practice: The Synergies and Their Relevance to Practice, Policy and Academia**

Coordinator: **Maria G. N. Musoke**, Professor of Information Science and Deputy Vice Chancellor, Kyambogo University, Kampala, Uganda, East Africa

Scope & rationale: In an era of partnerships and collaboration, rapid advances in information technology, paradigm shifts in research, learning and teaching, the growing research output that is increasingly becoming open access and the demands from library

users/patrons, there is need to build on the synergies to impact academic and research libraries' service delivery. Practicing librarians who conduct research or LIS academics and researchers who do research related to the practice of academic librarianship are invited to contribute papers to this session. The papers should share research findings about innovative practices and experiences –what works and what doesn't -to enable the participants to learn from the best practices or avoid what doesn't work. The application of the research findings to library service delivery, policy and in theories relevant to academics and the growth of knowledge will enrich the session.

Paper

Katri Rintamäki, From Teachers to Students: Digital Literacy Course for University Teachers

4. Partnerships and Collaborations for Improving Access to Healthcare Information

Coordinators: **Octavia-Luciana Madge**, Associate Professor, PhD, University of Bucharest, Faculty of Letters, Department of Communication Sciences, Romania & **Neil Pakenham-Walsh**, Coordinator of the HIFA campaign (Healthcare Information For All) and Co-director of the Global Healthcare Information Network, UK

Scope & rationale: Access to reliable healthcare information is still a challenging issue in the digital society. Partnerships and collaborations are one important way of providing better access to information and knowledge. This session will focus on actions and initiatives developed by health information professionals, healthcare workers, medical librarians and other specialists in order to facilitate access to reliable health information, including how to promote health literacy. This session will share recent activities, experiences, and projects developed in relation to access to health / medical information, and will discuss how this can be measured and improved.

List of papers

- 1. Neil Pakenham-Walsh, Octavia-Luciana Madge and Geoff Royston**, Empowering People with Essential Healthcare Information: A Prerequisite for the Global Sustainable Development Goal on Universal Health Coverage
- 2. Anne Madden**, "Ever Tried, Ever Failed...." – A Health Literacy Case Study and Evidence Review
- 3. Phil Segall**, Royal College of Nursing Regional Contacts Outreach Project
- 4. Annelie Janred**, Access to Information and Information Services for the Users of the Sahlgrenska Academy (Medical Faculty) at the University of Gothenburg - Reorganization During 10 Years

5. Information Science and Knowledge Organization in Motion: The New Data Science Approach and its Underlying Technologies

Coordinator: **Beatriz Valadares Cendón**, Professor, Graduate Program in Knowledge Management and Organization, School of Information Science, Federal University of Minas Gerais, Brazil

Scope & rationale: This session discusses technology-based trends capable of fostering the use of information resources in both libraries and other kinds of organizations. Some buzzwords that have represented such trends, are for example: knowledge based systems, applied ontology, machine learning and data management, data science, to mention a few. The papers illustrate the barriers that can hinder the unfolding of those trends in activities underlying new contexts as smart cities, smart

business and innovation industries. We clarify the impact of library services in such activities, particularly, the role of library services in the support of data management. Our presentations and discussions aim to reflect how Information Science, as well as Information Science graduate programs, have incorporated novel tools and methods offered by the new technologies.

List of papers

- 1. Renato Rocha Souza**, Data Science: A New Field and a Curriculum Proposal
- 2. Mauricio B. Almeida, Benildes C. Maculan, Eduardo F. Ribeiro**, Ontologies and Classification: The Unavoidable Interplay Between Human Reasoning and Machine Reasoning
- 3. Renata Maria Abrantes Baracho**, Information Systems Applications in Smart Cities, Smart Buildings and Smart Life
- 4. Fernanda Gomes Almeida e Beatriz Valadares Cendón**, Library Support for Research Data Management: A Taxonomy of Services
- 5. Ricardo Rodrigues Barbosa, Maria das Graças Murici**, Information Management and Digital Transformation: Uses and Impacts of New Technologies
- 6. Luiz Carlos Felipe de Oliveira e Beatriz Valadares Cendón**, Big Data in Information Science Literature

6. Bibliometrics and Scientometrics

Coordinator: **Teresa S. Welsh**, Ph.D., Professor and Director, School of Library & Information Science, University of Southern Mississippi, USA

Scope & rationale: Bibliometrics is the analysis of patterns of information related to usage data, impact, or publication data in print or electronic format. Scientometrics is the “quantitative study of science, communication in science, and science policy” (Hess, 1997). This session focuses on research such as publication pattern analysis, citation analysis, and content analysis of scholarly literature, websites, databases, or collections.

Papers

- 1. Lambodara Parabhoi**, Library and Information Sciences Research in India: A Bibliometrics Study of Indian Librarians
- 2. Teresa S. Welsh**, What Makes a Great Leader? A Bibliometric Analysis of Leadership Theory and Practice in LIS Literature
- 3. Vandy Pacetti-Donelson**, Identification of the Nature of Scientific Specialties in Conference Proceedings

Abstracts

A 21st-century Librarian – An Omnipotent Advocate of the Modern Age

Milena Kostić, Šejla Džidić and Aleksandar Jerkov

University Library Belgrade, Serbia

Abstract: Who is a librarian? What does a librarian look like and what does a librarian do? The common perception of a librarian is a modestly dressed, bun-topped, stern-looking guardian of books, whose main task is to maintain order and shush anyone who dares to speak within the sacred walls of a reading room (Pressley 2012). This may be the popular belief, but we, the librarians, know the real truth. In a nutshell, a library of the 21st century is an information and knowledge hub and a unique hotspot for culture and arts. In order to cater for all patrons' needs librarians are well educated and equipped with a myriad of hard and soft skills (Ptak-Danchak 2012) which enable them to sail through the world of digitization and technology and an endless sea of information. The librarians of the 21st century are not quietly and patiently waiting to be heard and helped, they speak up, take action and they make it happen. A librarian nowadays is still a cataloguer, heritage guardian, research facilitator, knowledge disseminator but also an entrepreneur, innovator, project manager, web and space designer, instructor, translator, intercultural facilitator, event organizer, bureaucracy fighter, entertainer, PR, advocate, fundraiser, quick-thinker, even quicker learner and last but not least a builder. But how does one acquire the aforementioned skills? How does a librarian progress from a quiet cataloguer to a voiced advocate and an efficient performer? This paper will portray the results of a Serbian Library Association two-year professional development course within which more than 200 librarians in Serbia have been trained how to advocate. This course was created in accordance with the guidelines of the IFLA International Advocacy Programme - a new capacity-building programme designed to promote and support the role libraries can play in the planning and implementation of the UN 2030 Agenda and the SDGs (The International Advocacy Programme (IAP) 2018) - and it demonstrates how Sustainable Development Goals (SDGs) of the UN Agenda 2030 can be used as powerful and convincing arguments to advocate for libraries. Furthermore, the course participants were informed and trained to implement the SDGs within their regular activities but also they learned that through some of the activities they perform, they were already promoting SDGs and contributing to their implementation.

As Medawar (1978) points out even though librarians are very helpful and often almost absurdly knowledgeable, their skills are sometimes underestimated and largely underemployed. That is why they need to become louder and advocate for both themselves and the libraries in order to build thriving communities. Because in the tsunami of global information, librarians provide us with floaties and teach us to swim (Weeks 2001).

Keywords: librarian, 21st century, advocacy skills, roles, SDGs, UN Agenda 2030

References

- IFLA International Advocacy Programme (IAP): <https://www.ifla.org/ldp/iap> (accessed 19 December 2018)
Medawar, Charles (1978) *The Social Audit Consumer Handbook: A Guide To The Social Responsibilities Of Business To The Consumer*. Palgrave Macmillan: London [etc.]

Ptak-Danchak, Alena (2012) 21st Century Librarians for 21st Century Libraries. *Proceedings of the IATUL Conferences*.

Pressley, Lauren (2012) *So you want to be a librarian!*. Library Juice Press. CA: Sacramento.

Weeks, Linton *The Old-Fangled Search Engine*. Washington Post, 13 January 2001

Academic Library: Human Touch in High Tech

Olga Einasto

PhD, Head of Library Services, University of Tartu Library, Estonia

Abstract: This report is an attempt to conceptualize the human aspect in the library online service. Today academic libraries orient more and more to the self-services and e-service solutions, based on the high technological skills of the modern students. Many library services are transforming to “human-less” customer services, thus, today academic libraries are building new service culture. However, according to the user surveys at the University of Tartu Library (Estonia), the human aspect did not disappear in the library service delivery – even if the service is rendered in the virtual environment, the *human touch* in the *high-tech* settings of library services is still important for academic library users.

The user survey revealed that modern students find equally important the possibility of getting information independently and quickly, and also the possibility of getting the needed consultation and support from the librarian. It is not enough for users to have the “human-computer” interaction; students expect *more* human interaction when use academic library services, they need also the “human-via-computer-to-human” communication.

The report concludes that library services are not only our digital product and not only *what* and *where* we, librarians, do, but also *why* we do it. It is a fact that technology is taking a big part in academic libraries, but high tech might not fully satisfy users without a touch of human communication and emotions. So it is important to think about library users not only regarding their information needs, but also considering their attitudes, emotions, and values. It is time to think about balance between high tech and human touch in the academic library services, and it is interesting challenge for today library managers.

Keywords: academic libraries, library services, e-services, library communication, user expectations, library service design

Access to Information and Information Services for the Users of the Sahlgreńska Academy (Medical Faculty) at the University of Gothenburg - Reorganization during 10 years

Annelie Janred

Head of Biomedical Library at Gothenburg University Library, Sweden

Abstract: In 2009, the Biomedical Library at Gothenburg University Library had an organization that was divided into departments, where the managers had operational responsibility. A reorganization was initiated and the library's functions become divided into three different teams. The team organization took place and the teams are responsible for the operational work.

Changes in the teams that have affected the academy's access or access to information resources are:

Centralization and coordination of e-resources to a central team at Gothenburg University Library. The local team is responsible for acquisition decisions, but the central team negotiates, makes available etc.

Coordination and centralization of ILL, all article orders (all subject areas/faculties at the University of Gothenburg) are carried out by customer service team at the Biomedicine Library.

A changed way of learning - by changing the methodology of the Biomedicine Library's teaching, by changing traditional teaching rooms to Active learning classrooms, the students get a new way of getting involved and learning how to get information searching skills and reference management.

Outcome - effective ways of working contribute satisfied users and students and dedicated staff with specialist expertise.

Keywords: reorganization, team organization, information resources administration, article copies, active learning classrooms

Analysis of Citation of World Health Organization Materials in the Russian Medical Journals

Tatyana V. Kaigorodova, Dilyara A. Synyakova, Irina A. Kryukova, Ekaterina I. Zimina

World Health Organization Documentation Centre based at the Federal Research Institute for Health Care Organization and Information of the Ministry of Health of the Russian Federation, Moscow, Russian Federation

Abstract:

Significance: World Health Organization (WHO) documents and publications cover the entire spectrum of health-related issues from policy papers and analyses of health systems' development to clinical guidelines for doctors and nurses. WHO information is a valuable resource for national-level decision-makers and different medical and non-medical specialists, groups and communities. A number of studies conducted in the Russian Federation and abroad showed high research and practical value of the WHO information. The purpose of the study was to analyze the use of WHO materials by the Russian medical and health research community on the basis of citation analysis.

Objectives: to compile a representative array of medical and health articles from the national journals for the last 9 years (2010-2018); to analyze the use of WHO materials by the Russian specialists through citation analysis of major national health and medical scientific journals for 2012-2018; and to identify the most cited WHO materials, national journals with the highest number of references to WHO materials as well as topics with the highest utilization of WHO information.

Results: The citation analysis was based on the "E-library.ru" scientific database containing a great massive of the Russian scientific journals. The final list for citation analysis contained 377 Russian journals on medicine and healthcare as well as related areas, such as social care, occupation health and etc.; a total of 2947 references have been identified. One third of the journals (33.4% – 126) contained 85% (2511) of all references; 10% (38) of the journals contained 65% (1913) of all references; and 4.25% (16) of the journals contained 50.3% (1483) of all references. The study has also identified journals with the highest number of references.

Distribution of references by topic: Tuberculosis was the most cited topic – 1095 references, Communicable diseases – 475 references, Pharmaceuticals and biological substance – 193 references, Tobacco control – 190 references, and Statistics – 168

references. Distribution by language (English and translation into Russian): the share of references to WHO publications translated into Russian equaled to 33.80% and the share of references to WHO publications in English added up to 66.20%. The most cited types of publications cited included: WHO Reports – 763 references, WHO Guidelines – 470 references, Bulletin of the World Health Organization – 357 references, Political documents – 352 references, and Documents of WHO conferences, meeting and working groups – 214 references.

Conclusion: The citation analysis showed that WHO materials are highly used by the Russian researchers especially materials on Communicable diseases including Tuberculosis, Prevention and Control of Non-communicable diseases and their risk factors, including Tobacco control, and Statistics. Since WHO materials present successful international experience they are used to develop national programs on priority areas in medicine and healthcare development as well as to compare situation with different problems between countries.

Analyzing Social Question and Answering through the Lens of Taylor's Question Negotiation

Sei-Ching Joanna Sin

Wee Kim Wee School of Communication and Information, Nanyang Technological University, Singapore

Abstract: Along with the increasing popularity of social media, social question & answer (SQ&A) sites have emerged to be a prominent information source for collaborative information seeking (Chirag, 2014; Shah, Oh, & Oh, 2009). Nevertheless, it is not uncommon that questions posted on SQ&A yield only low-quality responses; some questions received no response at all (Shah & Kitzie, 2012; Shah, Radford, Connaway, Choi, & Kitzie, 2012). Drawing from Robert Taylor's seminal work on question asking and reference interviews (Taylor, 1962, 1968), this study proposed to analyze SQ&A users' questioning, commenting, and answering on SQA sites as a question negotiation process. The study will demonstrate the application of Taylor's question-negotiation as a conceptual lens, together with the emergent social sequence analysis (SSA) methods and techniques (Cornwell, 2015; Gabadinho, Ritschard, Müller, & Studer, 2011) as analytical tools, in investigating users' information behavior on SQ&A platforms. Over 1,000 postings from Stack Overflow, a popular SQ&A community for programming questions ("Stack Overflow," 2018), were analyzed as a sample. The combination of a well-established library framework with new analytical methods such as SSA will contribute to providing new conceptual and methodological approaches to understand users' interaction and information behavior in this age of collaborative information seeking.

Keywords: collaboration information behavior, Robert Taylor's question negotiation, social sequence analysis, social question and answering

Annual Tracking of User Satisfaction with Library Services through a Customer Satisfaction Index

Dr. Adeline Lee¹ and Brenda Gomez²

¹Deputy Director (Business Analytics, Knowledge & Risk Management), National Library Board Singapore

²Manager (Business Analytics, Knowledge & Risk Management), National Library Board Singapore

Abstract: The National Library Board (NLB) Singapore manages a network of 26 public libraries, the National Library and the National Archives, and provide a wide range of library and archives content and services to the general public. To ascertain users' satisfaction with our services and content, the NLB conducts an annual Customer Satisfaction Survey (CSS) across all service touchpoints. Survey respondents are asked to rate their satisfaction across seven service areas, namely: Collection, Environment, General Services, Information Services, Programmes & Exhibitions, Staff, and Telephone and Email Services. The survey data are computed to derive a composite index, i.e., the Customer Satisfaction Index (CSI) and this index serves as a key library performance measurement for the NLB. This CSI is trended year-on-year to track the overall performance of NLB. Separate CSIs are also computed and tracked for the public libraries, the National Library and the National Archives. Based on the respondents' ratings of their perceived importance of the attributes in each of the service areas against their satisfaction ratings, gap analysis is performed to identify service gaps and areas for improvement. In so doing, the overarching aim is for the NLB to take the necessary and appropriate measures to better serve its patrons. This paper shares the NLB's customer satisfaction performance measurement methodology, and focuses on the measurement of user satisfaction of library services.

Keywords: user satisfaction, customer satisfaction index, library services, Singapore, National Library Board

ARCLib – Development of Open Source System for Long-term Preservation for Library Digital Collections

Martin Lhotak

Library of the Czech Academy of Sciences, Czech Republic

Abstract: Presentation will inform about the Czech ARCLib project. One of the main goals of the project is the development of an open-source solution for a bit-level and logical preservation of digital documents, respecting the national and international standards as well as the needs of all types of libraries in the Czech Republic. The mission of the ARCLib project lies, among others, in creating a solution that will allow institutions to implement all of the OAIS functional modules and entities, considering institutions' information model. The architecture is planned as open and modular and the final product will be able to ingest, validate and store data from a majority of software products used for creating, disseminating and archiving libraries' digital and digitised data in the Czech Republic. The solution is connected to Fedora commons repository and Archivematica, as far as it counts with creation of submission information packages using these software solutions. ARCLib project follows a series of activities of the Czech libraries from the last fifteen years. Motivation to deal with long-term preservation mainly came to the Czech libraries with digitized data. Individual libraries have gradually begun to run their own digital libraries and archive

the scanned data. The National Library of the Czech Republic created the National Digital Library (NDK) project, combining digitization, long-term preservation of existing and new data with an adequate access to them. Another motivation for the project is connected to Strategy of Czech Libraries for the years 2011-2015. In its part dealing with long-term archiving, requirement for testing freely available solutions had been made. As a result of this, LTP Pilot (LTP — Long-Term Preservation) project was undertaken. Its goal was a pilot implementation and testing of a low-barrier Archivematica-based system for long-term preservation of digital data. Even though libraries in the Czech Republic have official Czech translations of the ISO 14721 [2] and ISO 16363 [3] standards available, a clear implementation methodology concerning the Czech environment, used systems and formats is missing. In terms of the initial conditions for successful long-term preservation in the Czech Republic, the existence of a digitization standard such as the National Digital Library format can be considered as a great move. Since its definition, it is followed in all major digitization projects and in many smaller activities. It is necessary to ensure for these data a bit-level preservation (preventing physical data loss, alteration or corruption of digital files and media) as well as logical preservation (protection against adverse effects of changes, obsolescence of information technologies and data formats). Nevertheless, easily attainable software solutions for archiving are not available. The digital preservation issue was up until recently an exclusive domain of large institutions such as national libraries and national archives, which had the necessary mandates, finances and human resources. These institutions typically focus on developing complex customized solutions, built often on commercial systems. For most Czech libraries, complex and rather expensive LTP solutions are out of their reach. Advances in theory and practice of digital preservation, along with the growing need to address the long-term archiving of digital data in smaller institutions led to realizing that even with limited resources one can start creating their own solution using freely available software. Since the concept of open source is relatively widespread and previously undertaken projects brought promising results, it was quite clear the coming project would continue on this path. ARCLib was inspired by some of the projects developing systems for long-term preservation of digital data, which for this purpose also use open-source software (e.g. Archivematica, iRODS, Islandora or RODA). For the needs of the project, the open-source system Archivematica was chosen as one of the first choices, since it is dynamically developed and implemented in many projects around the world. However, it does not cover all the OAIS functional entities. Since it lacks a well elaborated data management and focuses on critical archiving functions only (transfer, ingest, create SIP/AIP/DIP), data curators are missing not only a powerful system for long-term preservation, but also a tool for an effective administration of archival data.

Therefore was decided to realize ARCLib project which pursues four main goals:

- developing a complex LTP solution ARCLib for logical as well as bit-level data preservation
- creating methodology for a logical preservation of digital documents for the specific Czech environment in respect to the international standards (ISO 14721 and ISO 16363 in particular)
- creating methodology, solution for storage of large amounts of data and ensuring their bit-level preservation

- verifying functionality of the entire solution in practice in the form of pilot system in at least one of the participating institutions

The final product is planned to be open source, free to download and use for any library, accompanied with the documentation and set of guides for easy implementation and use. The solution is connected to Fedora commons repository and Archivematica, as far as it counts with creation of submission information packages using these software solutions. ARCLib project is being financed from the applied research support programme NAKI II of the Ministry of Culture of the Czech Republic.

Assessing Sustainability Attitudes of Pakistani Nursing Students: Potential of Medical Libraries in Environment Care

Ayesha Khalid¹, Ghulam Farid², Dr. Syeda Hina Batool³

¹Visiting Faculty, Minhaj University, Lahore, Pakistan

²Chief Librarian, Shalamar Medical & Dental College, Lahore, Pakistan

³Professor, Department of Information Management, University of the Punjab, Lahore, Pakistan

Abstract: Going green is not only a central concept but also a necessity in healthcare. In developed world various medical academic institutes are preparing their graduates for planetary health too. Unfortunately, this is a neglected area in Pakistan and professionals from prominent sectors are not green aware. The current climatic conditions suggest that the environmental awareness and practice is a need to occur in Pakistan, specifically in healthcare. It is evident that medical profession interact with general public regularly so could play a significant role in going green cause. It is therefore pertinent for medical libraries to be climatic awareness focal partners of their parent organizations by developing collection and supporting sustainable development programs for its students, staff and teaching faculty.

The present study aims to investigate student nurses' attitudes towards sustainability in relation a call for medical libraries. It was found that what nurses perceived about the role of medical libraries towards green awareness as of its users. Nursing staff is larger than the doctors and this formula applies nearly the same anywhere in the world. The studies show that nursing students are poorly prepared to understand the connections between resources, climate change, sustainability and health (Goodman & Richardson, 2010). There is limited research on student nurses' attitudes towards sustainability even in Europe and elsewhere in the world. Therefore, the population of present study is the nurses.

An instrument based on the Sustainability Attitudes in Nursing Survey (SANS_2) questionnaire was developed. Data were collected from 4th year and from professional nurses having at least one year experience (340 respondents).

An overview of findings shows that respondents believe that water and pollution are the main environmental issues in Pakistan. Majority of the participants were aware of personal green practices (such as saving water, saving energy and recycling concept). However, a number of nurses perceived that their level of green awareness is very low. In addition, a large number of participants considered their libraries as vanguard for their green education and training. The study has contribution in existing literature at national and international level. The present study has practical implications for medical libraries and information professionals. Furthermore, the nurses were positive

about learning environment issues and ready to play their part as climate sensitive workforce

References

Goodman, B. and Richardson, J. (2010) Climate change, sustainability and health in UK higher education: The challenges for nursing. In Jones P, Selby D, Sterling S (Eds) *Sustainability Education: Perspectives and Practice Across Higher Education*. London, Earthscan. 109-132.

Assessing the Information Literacy Instruction Needs of Master Students in a Sino-American University

Mengjie Zou, Joanna Hare

Research and Instruction Librarian, Duke Kunshan University, P. R. China

Abstract: This study highlights an assessment of information literacy instruction needs among master students in graduate programs of Global Health, Environmental Policy and Medical Physics at Duke Kunshan University. The Duke Kunshan University is a Sino-American partnership of Duke University and Wuhan University. Students in those three programs will spend their first year at Duke Kunshan campus in Kunshan, Jiangsu Province, China and one semester at Duke University in Durham, North Carolina, United States in their second year. The study is distributed to first-year master students entered in 2018, second-year master students entered in 2017 and faculty members in those three programs. The study method includes an online survey to students through Qualtrics and series of in-person interviews with faculty members. The findings identify which topics are of most necessary from the different views among those three cohorts. In addition to that, the findings show the different preferences based on the program and the change of the needs between the first-year students and second-year students. Faculty members are also asked about their preferences on information literacy instruction formats, when the instruction should be delivered and whether the instruction can be embedded into their courses or program activities. The results provide good reference to guide the design and develop of future library instruction to master students at Duke Kunshan University.

Belarusian Way to the Open Access and Open Science: Case Studies

Viatcheslav Britchkovski

Information Centre, National Library of Belarus, Belarus

Abstract : Open Access (OA) initiative is based on a new model scholarly communication, which allows scientists to access information, libraries-to provide this access, information generators to provide modern information services for all interested parties. OA covers many aspects of the activities of libraries, publishers, scientific organizations and educational institutions. OA is a prologue to the development of Open Science initiative. Unfortunately, for a number of reasons, OA has not received wide development in Belarus. In order to improve the situation in 2009, on the basis of the National Library of Belarus, the Council of Libraries for information and cooperation was established (BelCoLib) to coordinate the activities of Belarusian libraries within the framework of the International consortium EIFL (Electronic Information for Libraries).

With the participation and support of the BelCoLib members, the work was carried out in the following main directions:

- Creation and promotion of OA repositories;

- Creation and promotion of OA journals;
- Organization of activities to support OA to scientific and educational information;
- Consultations on OA for researchers, librarians.

At present, more than 25 OA repositories from Belarus have been created and included into OpenDOAR.

The technology of inclusion of electronic journals of Belarus in the International catalogue of scientific journals of open access has been worked out. Eight Belarusian journals have been registered in DOAJ. As a result, the citation of the articles of this publication has increased sharply, which has contributed to the inclusion of some journals in the Scopus database and Web of Science Emerging Sources Citation Index. However, the lack of technological solutions for integrating OA electronic resources results in the low functionality of existing services. Repeated duplication of information, scattering of heterogeneous resources across various organizations reduces their availability, leads to loss of time and financial resources.

The paper presents some results of the pilot project aimed at the development of the system of OA resources integration on the basis of OAI-PMH protocol.

The purpose of this paper is to examine how Belarusian librarians develop their services for OA resources, which approaches are most effective, and the factors influencing the perceptions of the approaches used. An effective web-scale discovery service can improve the use of OA collections and strengthen library's role in the research process. In fact, our findings confirm this: libraries that have evaluated their discovery services have found these services have a positive impact on the institution. The successful implementation of VuFind front-end solution combined with the EDS knowledge base, has been considered in the paper. As discovery services become more widely adopted, they are helping library users discover an ever-increasing amount of OA content. The paper also presents the results of the project aimed at the study of OA scale and impact on research community in Belarus. It exploits quantitative methods based on oaDOI services and citation indexes of Web of Science.

The findings presented in the paper will allow a better understanding of librarians' and researchers' attitudes, views and effective techniques promote OA in Belarus.

Keywords: Open Access, Open Science, metadata, OAI-PMH, Web-scale discovery services, Vufind, Web of Science, oaDOI, Belarus

Best Practices for Library and Nonprofit Partnerships

Tatiana Bryant¹, Jonathan Cain²

¹Engagement and Inclusion Librarian, Adelphi University, USA

²Head, Data Services, University of Oregon, USA

Abstract: This presentation will highlight best practices gathered from our co-edited volume *Libraries and Nonprofits: Collaboration for the Public Good* (Litwin Books 2019). This presentation will explore collaborations between libraries and nonprofits to provide socially impactful services and programming to communities via case studies that illuminate the strategies libraries use to create short and long term partnerships with nonprofits, non-governmental organizations (NGOs), and civil society organizations delivering unique services and opportunities for users, as well as the challenges of designing and coordinating these endeavors. The presenters will also address the motivations, structures, and successes of nonprofit organizations that use library models for service delivery in the United States and around the world. Strategies for seeking

and developing nonprofits partnerships outside of traditional collaborations within the cultural heritage sector are key for building strong local communities, which is a priority for all libraries.

This presentation will be of value to libraries that participate in community engagement, outreach, and advocacy. Attendees will learn about the role of nonprofits in a community; identify potential nonprofit partners; articulate a pitch for collaboration to potential nonprofit partners; identify methods of assessment for nonprofit partnerships. These best practices are particularly relevant to librarians and staff the produce public facing programs and deliver public services, including outreach librarians, library marketing and communications, library administrators, friends of library groups.

Keywords: nonprofits, case study, social sector, partnerships, best practices

Beyond the Surveys: Qualitative Analysis from the Academic Reading Format International Study (ARFIS)

Diane Mizrachi¹, Alicia Salaz²

¹Ph.D., Social Sciences Librarian, Interim Librarian for Jewish and Israel Studies, Charles E. Young Research Library, University of California Los Angeles – UCLA, USA

²Ph.D., Carnegie Mellon University, USA

Abstract: From 2014-2017, the Academic Reading Format International Study (ARFIS) collected data from over 20,000 university students in 33 countries on their reading format (print and electronic) preferences and behaviors when engaging with their academic texts. Quantitative analysis from the amalgamated survey data show a consistent preference for print reading among the majority of students worldwide (1). This paper presents findings from our qualitative analysis of students' survey comments. We investigate the questions: Why do students prefer to read in print or electronically? Under what circumstances will they read a text in their less preferred format? Can a pattern be found among responses that will assist librarians and educators when deciding upon format policies?

The ARFIS survey consisted of 16 Likert-style statements, six demographic questions, one multiple-choice question, and an open remarks field. Every question included space for further comments. To gather data from a large international sample, the survey was translated into more than 20 languages by the local researchers as relevant. Individual researchers own their country data, and several have published their results (e.g. (2, 3, 4). For our qualitative analysis, we used English language responses only, and compared comments from a sample of 325 of students whom we coded as preferring print, with responses from 325 students who prefer electronic format. These categories were determined by replies to statements like: "I prefer to have all my course materials in print format (e.g. book, course reader, handouts)," and "I prefer to read my course readings electronically." Comments were coded using an inductive approach into categories such as: Affordability; Convenience/Accessibility; Learning engagement; Learning quality; Tactile properties; Physical effects; Ecological friendliness; and Knowledge/Comfort of format.

Among the patterns discovered, students state they prefer print primarily because they believe it facilitates better learning engagement and outcomes with less detrimental physical effects such as eyestrain and headaches. Electronic format was preferred more for its perceived lower costs, greater accessibility, convenience, and environmental friendliness. Analysis of comments describing circumstances in which the lesser preferred format is used were also analyzed. Most commonly, students described how

they preferred print for learning purposes but compromised with electronic because of the lower costs and greater convenience. We thus see a schism in which students must prioritize – better learning or better economics and convenience. These differences carry a potential impact on individual learning outcomes and disrupt efforts for equal educational opportunities. Ideas to address this dilemma will be discussed.

Keywords: print reading, electronic reading, college students

References

1. Mizrachi, D., Salaz, A. M., Kurbanoglu, S., Boustany, J., & ARFIS Research Group. (2018). Academic reading format preferences and behaviors among university students worldwide: A comparative survey analysis. *PLoS one*, 13(5), e0197444.
2. Kortelainen, T. (2015, October). Reading format preferences of Finnish university students. In *European conference on information literacy* (pp. 446-454). Springer, Cham.
3. Zabukovec, V., & Vilar, P. (2015, October). Paper or electronic: preferences of Slovenian students. In *European Conference on Information Literacy* (pp. 427-435). Springer, Cham.
4. Pešut, D., & Živković, D. (2016). Students' academic reading format preferences in Croatia. *New library world*, 117(5/6), 392-406.

A Bibliometric Analysis of Business Literature Regarding Diversity, Inclusion, and Gender

Jean Clenney

University of South Carolina, USA

Abstract: One of today's important issues facing academia is the topic of Diversity, Inclusion and Gender. As research professionals how can we best support research for our faculty and universities?

Diversity and inclusion are good for all organizations. Organizations function better when employees are a gender balanced, diverse group – a dynamic mix of various cultures, ages, and viewpoints. The ideal diverse climate represents the presence of differences. The Society for Human Resource Management (SHRM) defines diversity as “the collective mixture of differences and similarities that include for example, individual and organizational characteristics, values, beliefs, experiences, backgrounds, preferences, and behaviors”.

Diversity will not work if it's not accompanied by inclusion. While diversity is the mix of individuals, inclusion is the mix working together. Diversity is not about gender, sexual orientation, or ethnicity; it is about all of these combined. More universities are implementing D & I programs and classes. As librarians, how can we illuminate themes to support our libraries and curricula?

Librarians are interwoven with scholarly pursuits of academia. Even though we are interconnected, there are still questions. Can we use bibliometrics to aid in uncovering trends in the field? Are these results reflective of the fields' true data? Is there a gap in research? If so, how can we manage the gap? How can librarians contribute to the current research?

To find out, I've conducted a bibliometric analysis within business literature using the terms; diversity, inclusion and gender. Even though bibliometrics is often used as a methodological tool, there is currently no bibliometric analysis of D & I. The objective is to characterize the field based on bibliometrics to analyze the patterns that appear within major business journals and to unearth trends and opportunities. This study is based on several following indicators and techniques using the Web of Science (Core Collection) database from 2000 to 2019. WOS covers more than 12,000 high-impact scientific journals. Specifically, it covers about 5,300 publications within the social

sciences including 55 academic areas. (Thompson Reuters, 2016). My search is filtered by restricting the limiters to ‘article’ and the academic areas of ‘management’, ‘business’, ‘business finance’, and ‘information science library science’.

Although there are other sources to be considered, the Web of Science is widely recognized for its selection of journals. Even though WOS guarantees the quality and reputation of the products, one of the limitations is that some high-impact products may not be represented. In order to uncover any gaps of research, the results are compared with a similar search within Harvard Business Review and MIT Sloan Management Review. Both publications provide a bridge for publications between academia and business.

My objective is to characterize the field based on bibliometrics to reveal the relevant authors contributing to the field. Contributing to the literature by clarifying to potential researchers the main concepts. Furthermore, identifying the main trends and opportunities potentially useful to business school curricula and faculty. Additionally, this demonstrates a method which can be used by all librarians to aid research in other fields.

Big Data in Information Science Literature

Luiz Carlos Felipe de Oliveira¹ and Beatriz Valadares Cendón²

¹ Master in Information Science. Graduate Program in Knowledge Management and Organization, School of Information Science, Federal University of Minas Gerais, Brazil

² Professor, Graduate Program in Knowledge Management and Organization, School of Information Science, Federal University of Minas Gerais, Brazil

Abstract: The large amount of structured and unstructured data, called big data, signals for new methods to record, organize, analyse and provide access this information. To help understand how information Science (IS) has incorporated Big Data as a topic of study, this paper researched the scientific production of the area indexed in main referencial databases. The paper reviews the emergence of large volumes of data, the resulting impacts experienced by the area of Information Science and by the information scientist, and the related concepts of e-science and data science. In this bibliometric study, data collection was done through searches in referencial IS databases to identify the scientific literature on big data. Authors and their programs, universities and countries were identified. Then the works were categorized through content analysis of their abstracts. The results present a map of how Information Science scientific production has approached big data showing topics of research and a ranking of universities/organizations, graduate programs, authors and countries.

Keywords: big data, information science, e-science, data scientist, information scientist

Biometric Devices for Better Appraising Users: A Systematic Review of Research Designs in Information Architecture, Information Behavior and Information Retrieval

Sholeh Arastoopoor¹, Mahdi Zahedi Nooghabi²

¹Ph.D, Ferdowsi University of Mashhad, Iran

²Ph.D, Knowledge and Information Science, Iran

Abstract: Biometric devices are considered among useful tools for better appraising human behavior. They help researchers to monitor those aspects of human reflections in response to environmental stimuli. These devices due to their technological developments through time, have reached to a state that can meticulously trace the changes in some of the physiological indicators that can roughly estimate people's cognition and psychological state. Yet using them and more importantly interpreting their outputs require a certain level of expertise. Nevertheless, applying those in different human behavior studies are becoming common. Devices such as EEG, Facial Expression Analysis, Eye Tracking, ECG / EMG, GSR/ Electrodermal activity (EDA), FMRI, and FNIRS are currently used in different studies along with other complementary tests to monitor human beings behavior. Among them a set of researches focus only on applying these devices in user studies from web design to marketing or advertising. Due to the fact that these and their methodologies are relatively new in this field, it would be beneficial to monitor if these types of studies are applicable in information behavior or information retrieval and to what extent. This paper aims at answering these questions; and to this end it seeks to review the methodologies of those studies that have used one of the previously mentioned devices as means of studying information environment, retrieval process and also users' information behavior. WOS and Scopus databases were selected as the main sources to find the related papers. In order to select the papers a systematic review process was applied. First the databases were searched for those document containing one of the previously mentioned devices as either keyword or title-keyword in a ten years timespan (2009-2019). Then the retrieved documents were again controlled and based on their abstract. Those that did not meet the criteria were dropped and the remaining sum were analyzed based on their population, complementary tests, research design and approach. The preliminary results reveal that most of these studies have a quantitative approach; but since most of them have complementary tests some of them are considered to have also mixed approaches.

Keywords: biometric devices, information retrieval, information behavior, information architecture, systematic review

Blended Learning among Library Professionals in Open Access Environment: Preparing Themselves for 21st Century

Dr. Vinita Jain

Librarian, Maharshi Dayanand College of Arts, Sc. & Commerce, Mumbai, India

Abstract:

Purpose: The objective of this paper is to assess digital literacy skills of professional librarians in Indian academic libraries. It also assess hybrid blended role of Library professionals in recent times and to deal with current challenges.

Theme: Paper comes under sub theme of application of innovative ideas. Adoption of new skills is needed to support the changing roles of librarians and that is possible through blended learning. There are so many online portals where professionals can update themselves at their own pace and time.

Design, Methodology, Approach: A survey was conducted using a web based questionnaire. The question targeted Library professionals of Indian academic libraries. Professionals who are in my contact list can approach easily to get the questionnaire filled. Informal communication is also possible for further clarification. Some of the questions were asked like why they want to update skill? Why blended learning is necessity? Is open access is threat to the profession or boon to the libraries? Whether user needs library support even, to access the information available free on web? Whether they use online learning material just for certificate or actual learning? The use of online material has become a habit for them, whether they check the authenticity of the information before going to register online? The population of this study is Librarians, Library staff, and technical library staff working in various sections of the library. Data collected was analysed with the help of statistical tools.

Findings: Survey found increasing awareness among Library professionals towards blended learning. They have to adopt skill as soon as technology advancement at fast pace. Lifelong learning /self paced learning / hybrid learning is a reality to sustain in open access era, where lot of information are available on net and users are not required to come to the library. Library Professionals help the users more effectively to use information available free on net to save the time of the user. Librarians play an important role in facilitating access to information.

Limitations: Study is limited to library professional working in Indian Libraries. We have to send reminders to professionals to fill the web survey.

Practical Implications: Study identifies some new skills that are required for library professionals. Blended learning goes beyond the boundaries. Library professionals can seek the information whenever they need it. They can learn by themselves through online courses, MOOC's, workshop, webinars, discussion forum and audio video online contents. With the increasing technology and an explosion of networked information add a whole new level of complexity for users. Thus blended learning is a solution to keep pace with the technology, results better service provided to information seekers. Study will be useful to all the teaching library professionals' and also Librarians as well.

Originality: Blended learning is must in the context of continuing technological advances and educational change. Those who adopt can grow; otherwise they will be outdated in the profession. Its findings will assist relevant authorities to plan how library professionals can develop professional competencies to sustain in open access environment. This paper will attempt to assist library personnel as they transform libraries into community hub for a better society.

Keywords: blended learning, hybrid learning, library professional competencies, online learning

Breaking Boundaries: Academic Libraries and Interdisciplinarity in the Big Ten Academic Alliance

Hilary Bussell

Assistant Professor and Social Sciences Librarian, The Ohio State University, Thompson Library Room 222F, USA

Abstract: This presentation will discuss the results of a qualitative research study on current practices in academic libraries for supporting interdisciplinary research and teaching. Interdisciplinarity has increased tremendously in higher education over the past several decades. At the author's institution, as at many research intensive universities, interdisciplinary activities take place in a wide variety of contexts, including cross-campus research initiatives, interdisciplinary centers and institutes, and the daily scholarship and instructional activities of faculty working within academic departments.

For academic libraries, interdisciplinarity presents both opportunities for innovation and challenges to traditional organizational structures and job duties. Many librarians are polymaths, adept at switching vocabularies and conceptual frameworks as they help members of different departments find information. At the same time, providing research support, collection development, outreach, and instruction in an interdisciplinary context can prove challenging for academic libraries as organizations, which typically structure these services by disciplinary silo.

It was with this context in mind that the author undertook an environmental scan of current practices in academic libraries for supporting interdisciplinary research and teaching. The author chose as a sample the academic libraries at Big Ten Academic Alliance (BTAA) institutions. BTAA is a consortium of fourteen major research universities located in the Eastern and Midwest United States. The author ran search queries relating to interdisciplinarity, cross-disciplinarity, and related concepts on the websites of all fourteen academic libraries, and collected approximately 700 relevant webpages for analysis. Using the qualitative tool NVivo, the author coded the pages and identified several broad themes that capture the different ways that the BTAA libraries and librarians are supporting interdisciplinary activities.

The presentation will consider these themes, which relate to areas including the development of new positions and service models, libraries as publishers, librarians at the intersection of interdisciplinarity and digital scholarship, and the role of librarians as members of interdisciplinary research teams. The author will reflect on what the themes tell us about how libraries are adapting to meet the needs of interdisciplinary researchers. The presentation will finish with some practical suggestions for how libraries can continue to evaluate and adapt their organizational structures, services, and positions in order to fit an increasingly interdisciplinary landscape.

Keywords: interdisciplinarity, subject librarianship, research support, library instruction, qualitative methods

Brick by Brick: Building a Local Information Literacy Test

Susan Gardner Archambault

Head of Reference & Instruction, Loyola Marymount University, Los Angeles, CA, USA

Abstract: This “best practices” session will present a case study of how one university in the United States designed a homegrown test to measure the information literacy and digital literacy learning outcomes at their institution, while also mapping all questions to the *Association of College and Research Libraries (ACRL) Framework for Information Literacy for Higher Education*. Librarians identified five information literacy and digital literacy learning outcomes from the curriculum at the University, program, and course levels of our institution consisting of conceptualizing a research strategy, evaluating information, locating and accessing information, selecting and using information to provide relevant evidence, and citing sources. Performance indicators were developed to measure these outcomes, and then test questions using multiple choice scenarios were developed that embodied the indicators. All questions connected to corresponding frames from the *ACRL Framework*. Librarians also developed two new learning outcomes outside of the curriculum for being a digital citizen and being an empowered learner of current digital technologies. The new outcomes have corresponding performance indicators, multiple choice scenario questions, and frames from the *ACRL Framework*. This session will cover the development of the test instrument and its implementation on a sample of students.

Librarians designed a 25-question multiple-choice test in Qualtrics to measure designated information literacy and digital literacy learning outcomes. Questions were substantially revised from an earlier draft implemented as a pilot in 2016 to improve the validity and reliability of the questions. Correct answers were assigned point values so that the test would automatically score itself upon submission. Eighty students in their last semester at the university were recruited to take the test from an original stratified sample of 300 students to control for gender, ethnicity, and major. Library staff proctored the test, and participants received an incentive. Librarians identified low scoring areas and will address them through the library’s instruction program.

Librarians analyzed the results to determine low-scoring areas. The average score was 74 percent, with the lowest-scoring outcomes relating to interpreting evidence and citing evidence. Students also had trouble finding a book in the library, and they confused the purpose of different research tools. The analysis will be shared with faculty teaching relevant courses containing the learning outcomes measured by the test. Assessment of information literacy and digital literacy learning outcomes leads to greater communication between librarians and faculty. Test results will also lead to improvements in the information literacy and digital literacy curricula at this university. The test will be shared in CORA (Community of Online Research Assignments), an open educational resource for librarians and faculty, to allow for its free use and repurposing by other educators. This “best practices” session will lay the foundation for attendees to discuss the best ways to measure information literacy and digital literacy within their own instructional environment. It will also give attendees a concrete example of assessing student learning outcomes in ways compatible with the “threshold concepts” approach to information literacy contained in the *ACRL Framework for Information Literacy for Higher Education*.

Keywords: information literacy, learning outcomes, assessment

Bridging the Gap: How Institutional Support Affects Librarians' Research Capacity

Claudia McGivney & Jennifer A. DeVito

Adelphi University, USA
Stony Brook University, USA

Abstract: Academic librarians are often required to conduct research, publish, present at conferences and make significant contributions to their field in order to achieve and maintain tenure. However, many academic libraries do not provide protected time in which to conduct research and writing and the financial support provided for travel and conference fees leaves librarians responsible for covering costs themselves. Academic librarians, both on the tenure-track and tenured, often find themselves balancing a workflow heavily skewed towards service and research consultation with the requirements for research and publication. To enhance their scholarly productivity academic librarians must receive institutional support in terms of time, training, and funding to conduct meaningful research. At a number of institutions there is wide disparity between what is expected of librarians and the support received to meet those expectations. This study explored scholarly productivity among academic librarians in the United States and Canada in relation to their rank, tenure requirements and institutional support to examine trends in institutional support and models that seem to yield the most successful research outcomes.

Keywords: academic libraries, academic librarians, research support, tenure, tenure-track

The British School at Rome Library: Challenges and Opportunities

Valerie Scott

British School at Rome, Italy

Abstract: The British School at Rome (BSR), the UK's leading research centre abroad, fosters academic research and creative practice in the arts, humanities and social sciences through competitive residential awards. We act as a bridge that links the intellectual and cultural heart of Rome, Italy and the Mediterranean to academic and creative researchers and practitioners affiliated to universities and institutions in the UK and the Commonwealth.

Founded in 1901 and modestly housed in an apartment in Palazzo Odescalchi in the centre of Rome, the BSR moved to its imposing new building in the Valle Giulia near the Borghese Gardens in 1916. Accommodating a residential community of around 35 award holders and residents, the BSR offers a welcoming environment for personal research but, perhaps even more importantly, a unique opportunity to engage with researchers and practitioners from a wide range of disciplines, an experience which many describe as 'transformational'. Fruitful interdisciplinary exchange between, for example, archaeologists and practicing artists, can often result in innovative collaborative projects. A full and vibrant programme of public events including exhibitions, screenings and international congresses offers further opportunities for collaboration and exchange.

The BSR is one of 26 foreign academies in Rome and all are members of the *Unione Internazionale degli Istituti di Archeologia, Storia, e Storia dell'Arte in Roma* which promotes collaboration between the 10 Italian member institutes and the non-Italian

participants. One of the most successful initiatives, with the advocacy of the *Unione*, was the creation of the network URBiS, a community of 23 research Libraries in Rome, of which the BSR was a founding member, that provides online access to their collections (www.urbis-libnet.org/vufind/). The collective holdings of these Libraries in a city the size of Rome is an extraordinary resource and over 2.6 million records are currently available. Of these nearly 100,000 record the holdings of our specialist reference Library, the heart of the BSR, providing the resources and support necessary to facilitate the research of all our award holders and residents as well as welcoming non-resident readers.

What does the future hold for small specialist research Libraries? Or indeed, for anything ‘small’, including our institutions? We are facing many challenges and the uncertainty and insecurity that pervades our societies can seem overwhelming - uncertainty regarding future funding and long-term survival; diminishing resources, both financial and human; reliance on non-governmental support; the challenge of fund-raising; the lack of investment; sustainability; the problem of lack of space; the prohibitive costs of electronic resources; the danger of obsolescence, to name just a few. How should we react to this reality? What tools and models do we have to help us face the future? Over the past few years the BSR has been addressing these questions, working towards a coherent strategy including the potential of digital humanities, the sharing of resources and the capacity to generate research. Oddly, crises can offer an opportunity but only if approached proactively and with an open mind.

Capturing Structure of Process of Socially Withdrawal People’s Information Practice in an Online Message Board: Applying both Narrative Inquiry Approach and Discourse Analysis to their Text-based Narrative and Dialogue

Hajime Naka

M.A., Tokoha University: Department of Education, The Graduate School of Library, Information and Media Studies, University of Tsukuba, Japan

Abstract:

Purpose:

This empirical study explores information need and the process of an information practice of socially withdrawal people in a text-based online message board by particularly focusing on “*Gap*” situation appeared in their messages.

Design/Method/Approach:

A mixture of a narrative inquiry approach and a discourse analysis were used to analyze 10 cases of the written description posed.

Findings:

Three constituent elements: *Self-disclosure*, *Gap* and *Information need* were consecutively appeared in many posts. In addition, these three elements were connected with each other and developed the process of information practices of hikikomori user in an online message board.

Originality/value:

this study provides one of useful analytical methods in order to identify an obscure concept of information need in context of socially marginal people’s information practice in a virtual environment.

Keyword: Hikikomori, online message board, information needs, information practice, narrative inquiry approach, discourse analysis

The Case for Bounding and Within-Case Sampling in Exploratory Case Study Methodology with Children and Youth Participants

Dr. Lucy Santos Green

Associate Professor, University of South Carolina, USA

Abstract: According to Lincoln and Guba (1985), a case study is conducted when the researcher desires to reconstruct respondents' constructions, providing readers with a type of vicarious experience. Exploratory case study methodology is especially appropriate when the structure of the study is temporal in nature, enabling the researcher to collect rich and descriptive data in a shorter time frame (Denzin & Lincoln, 2008). There has been criticism of the *one-shot case study* (one-setting, one-time-span cases) as a method that places misdirected effort in collecting copious amounts of detail as opposed to comparing a set of observations to another instance. However, a one-shot exploratory case study, when appropriately designed and applied, is an effective methodology for study settings that include a large amount of contextual knowledge, such as schools or children's and youth library programs (Miles & Huberman, 1994).

The exploratory case study presents a significant challenge for data collection. Researchers often run the risk of becoming overwhelmed by a mountain of data since they are not sure what would or would not be usable. Bounding the study translates into a more efficient use of research time, as well as a more comfortable experience for study participants. Miles and Huberman (1994) list the following steps to bound exploratory case study data collection: 1) identify a conceptual framework, 2) formulate research questions, 3) define a case, 4) create a preliminary sampling plan, 5) apply within-case sampling of participants if possible. This paper presentation will provide a thorough description of bounding data collection during exploratory case studies. Implications for this method and LIS, especially in the context of researching with children and youth participants, will be discussed. Examples of actual applications within LIS will be given to illustrate the benefits of bounding and within-case sampling for qualitative approaches.

Keywords: exploratory case study, within-case sampling, conceptual framework, children and youth, qualitative research

Causality of School Libraries and Student Success: Literature Review Using the Mixed Research Synthesis Method

Laura A. Pasquini¹, and Barbara Schultz-Jones²

¹Department of Learning Technologies, University of North Texas, USA

²Department of Information Science, University of North Texas, USA

Abstract: In this research study, three independent, concurrent meta-syntheses of education policy, theory, and best practices research were used to identify activities and features that show causal relationships between school libraries and student learning. This empirical literature collection was compiled using a mixed research synthesis (MRS) approach, that is, a review of "mixed" objects of synthesis (i.e., the findings appearing in written reports of empirical qualitative, quantitative, and mixed methods studies) as well as the mode of synthesis (i.e., the qualitative and quantitative

approaches used in the studies) of research published between 1985-2015. The MRS method was chosen as a strong way to develop evidence summaries, to develop an understanding of rival theories, and the determination of the active ingredients, effectiveness, and weak links in the implementation chain of interventions, programs, and policies. The MRS meta-syntheses results are integrated and refined to establish a list of possible causal features that may be present in school library program activities, among school library practices, and how school librarians themselves impact student success in K-12 education. The outcome of this collective MRS approach resulted in a corpus of scholarship-related student success, learning, and achievement caused by school librarianship and centralized themes related to this research question, “To what extent do the causal relationships between school-based factors and student learning offer possible causal relationships between school libraries and student learning?” This particular approach is well suited for understanding causal impacts school libraries and librarians have on learning. An Integrated MRS, with top- down configuration entails counting, tabulating, diagramming, and narrating thematically diverse individual findings, or sets of aggregated findings, has the potential to identify promising implications and practices within educational institutions and in the field of library science. Findings in MRS configurations may contradict, extend, explain, or otherwise modify each other. With the MRS approach, researchers link findings and are able to draw broader conclusions that may not have been identified or addressed in the primary studies reviewed. The findings of this aggregated and synthesized MRS method not only offer key themes for causal research for school libraries and learning, but also offer strategies for other scholars who wish to utilize the MRS methodology to expand systematic literature reviews in library research. Findings from this study will include a list of foundational themes for subsequent systematic, causal investigations of school libraries as learning spaces and to identify potential practices, theories, and policies that might be further investigated with causal research.

Keywords: K-12 education, school librarians, learner, success, impact, mixed research synthesis

Co-building Open Science: Portrait of the University Library as a Publisher

Emilie Barthet, Jean-Luc De Ochandiano

Université Jean Moulin Lyon 3, France

Abstract: Located in Lyon, France, the Jean Moulin Lyon 3 University is home to 30 000 students in law, management and humanities, around 600 academic staff and 18 research units. A dedicated research support team has been implemented within the Jean Moulin Lyon 3 University library in 2015, one of its aims being to promote open access to research results. In 2017, answering to requests expressed by researchers to be helped in their online publishing, the library has launched an in-house incubator for open access journals in social sciences and humanities. Researchers and staff from the research units were provided with an open access standard-compliant publishing platform, technical and editorial assistance and training for current publications and a program to have the backlog of issues addressed – all tailored to meet the needs of each research team. The incubator raison d’être is to allow the University’s research to be available on an open access basis, to reinforce good publishing practices among research units and to improve the overall visibility of the research produced by Jean

Moulin Lyon 3 researchers. The incubator technical platform and procedures strictly adhere to those set forth by OpenEdition, the French national open access platform for books and journals in social sciences and humanities – the idea being that once mature enough, Lyon 3 journals could migrate onto the national platform and reap further benefits in editorial professionalism and academic visibility. The project quickly gathered momentum and it now hosts nine Lyon 3 journals with two more in the pipeline. Two other HEI have approached the library to see if they could publish on the platform, thus expanding its role beyond the limits of its parent institution. Its success was confirmed when it became the first official incubator for OpenEdition in 2018. This rapid development took hold in a context of rising support for open science and open access models from authorities and funding bodies: the French HE Minister announced a comprehensive plan for the development and funding of open science during the Lille LIBER conference in July 2018 and the French research funding agency (ANR) is committed to implement Plan S. The Lyon 3 incubator team has been instrumental in forming, in late 2018, a network of French incubators and publishing platforms in social sciences and humanities. Named REPÈRES, the network promotes sharing good practices among public-funded open access publishers. In a publishing landscape where the announced demise of the big deals’ risks paving the way for the unchecked rise of APCs, the Jean Moulin Lyon 3 library project is a contribution to biblio-diversity in that it supports an open access model and the use of vernacular languages (French in the case at hand). It also reinforces the intertwining of academic and library staff for the common goal of scientific publishing, thus placing the library in the position of co-building science.

Keywords: open access journals, library as a publisher, co-building science with researchers, biblio-diversity

Checking Adherence to the Principles of Transparency and Best Practice in Scholarly Journals as a Library Service

Jiří Kratochvíl and Lukáš Plch

University Campus Library, Masaryk University, Brno, Czech Republic

Abstract:

Introduction

Since 2017, the University Campus Library of Masaryk University in Brno, Czech Republic (UCL) has been providing a service to check compliance with the principles of transparency and best practice in scholarly journals. The service is provided exclusively to PhD students and researchers from CEITEC, Faculty of Sports Studies, Faculty of Medicine and departments of Faculty of Science situated in the University Campus at Bohunice.

Method

From February 2017 to March 2018, journals were evaluated on the basis of the COPE, DOAJ, OASPA, WAME and Jeffrey Beall’s criteria. During this period, it was found that some of the criteria were not relevant, and thus the method used to uncover suspicious journals and publishers was revised. Since April 2018, the service has adopted overlapping criteria issued only by widely respected authorities, namely COPE, DOAJ, OASPA and WAME.

Results

From February 2017 to November 2018, we were requested 166 times by 44 users to check 157 journals. We spent 73.5 hours in analysing journals, and of these journals 52 (31.3%) were evaluated as very disputable, 10 (6.0%) as rather disputable, 26 (15.7%) as rather indisputable, 76 (45.8%) as indisputable and 2 (1.2%) as unverifiable. The most frequent breaches of publication ethics were a peer-review time that was not specified or short (70), article processing charges that were not specified or non-transparent (62), a missing or insufficient declaration of manner of Open Access (39), no e-mail service contact or a general one (31), false information about metrics from Web of Science and Scopus (26), failure to adhere to periodicity in the last three years (25), declaration of misleading metrics (25), no editor-in-chief (24), a fake person in the editorial board (23), or having a name similar to a previously published journal (20).

Discussion

From the point of view of financial and personnel requirements, using the service was, so far, more efficient than using the commercial database Cabells Scholarly Analytics. During the autumn of 2018, we arranged two workshops to discuss the relevance of the criteria mentioned above. Participants identically indicated an archiving of full texts, a declaration of compliance with ethical standards, a description of the peer-review process, a specific amount of article processing charges and valid information about metrics from Web of Science and Scopus as the important criteria. According to the experience gained and the results of the workshops, we will try to specify the principles of transparency and best practice in scholarly journals not only on the basis of the discussion of professional organisations and librarians but on statistical analysis as well.

Conclusion

Our two-year experience with the service “Compliance with the principles of transparency and best practice in scholarly journals” shows the vital role of libraries in the evaluation of journals and in supporting researchers in choosing journals for their publications.

Commercial Advertising in Greek Libraries: An Alternative Funding Strategy

Nikolaos Koustas, Alexandros Koulouris¹, Konstantinos Kyprianos², Eftichia Vraimaki²

¹Assistant Professor at University of West Attica, Greece

²Adjunct Lecturer at University of West Attica, Greece

Abstract: Libraries in Greece have lost much of their already limited funding due to the recent global economic crisis. It has therefore become necessary for them to seek alternative sources of income. One such strategy could be commercial advertising, which constitutes the renting of space within or outside the library or using the library’s website to place ads. However, an application of commercial advertising in libraries can trigger negative reactions from library patrons.

In this context, the aim of this paper is to investigate stakeholders' views regarding the use of commercial advertising for in Greek libraries, using a quantitative methodology. In more detail, a structured questionnaire was developed and distributed to two distinct stakeholder groups, namely information professionals and library users. The types of advertising that are explored are ambient, outdoor and online advertising and the objects to be advertised are products, services, book publishers, local businesses, cultural and political events. Overall, 510 questionnaires in electronic format were distributed; 370 questionnaires suitable for analysis were returned, for a response rate of 69%.

The results reveal that commercial advertising is considered as a profitable strategy for Greek libraries by both respondent groups alike. Respondents also agree that online advertising is the most appropriate type of advertising and the most appropriate object, cultural events. Managerial implications of the findings are discussed.

Keywords: commercial advertising, libraries, leadership, marketing, Greece

A Comparative Study of the Performance Indicators in National Libraries of the World

Elaheh Hassanzadeh Dizaji¹, Farideh Osareh²

¹PhD candidate PhD Student in Knowledge & Information Science, Shahid Chamran University, Ahvaz, Iran/ Young Researchers Club, Tehran Medical Sciences Branch, Islamic Azad University, Tehran, Iran/Expert of National Library and Archive of Iran

²Ph.D., Professor of Library and Information Science and Director of KM, Excellence Center of Shahid Chamran University Ahvaz, Iran

Abstract: This paper seeks to explore the similarities and differences in performance indicators between national libraries of world in order to provide a global model for national libraries.

Data from this article was collected by an email that was given to the national libraries of the United States, Britain, Canada, France, Australia, Switzerland, Japan and Spain. Initially, with use of content analysis of performance indicators was categorized in thematic categories. Then, each of the national libraries that used the specific performance indicator was identified. At the end, a table was obtained indicating which performance indicator is applicable to all or most of the national libraries, and which performance indicators are specific to a specific national library is.

From the results of this paper it can be said that according to the results of the analysis of the content of the performance indicators of the mentioned national libraries, it is possible to identify for all national libraries a model that can be used to evaluate their performance and still be able to Compare your activities with other national libraries.

Keywords: national libraries, performance indicators, comparative study

Comparing the Risk Management Approaches at Two European Academic Libraries

Nuria Balagué Mola¹, Jarmo Saarti²

¹Deputy Director, Library Service, Universitat Autònoma de Barcelona, Spain

²Library Director, PhD, University of Eastern Finland Library, Finland

Abstract: The globalization and digitalization of the service provision has meant also for the libraries that the risk management has become a vital part of the library work and management (Andersen & Schrøder 2010, xvii). In addition, there is also a need for the corporations to communicate about the risks and their management to users, staff and to the network organizations (Borghesi & Gaudenzi 2013). At the same time the libraries use more and more outsourced services in the digital world with technology that develops fast and to users that require more than maybe ever before in the history. These all set high standards for the risk management and prevention (Chapman 2011, 9-10). Risk management is “to identify risks specific to an organization and to respond them in an appropriate way” (Merna & Al-Thali 2010, 2). It is a formal process where the library identifies and assesses its risks and plans how it manages the potential risks.

The adoption of a quality management system is a strategic decision for an organization that can help to improve its overall performance and provide a sound basis for sustainable development initiatives. ISO 9001:2015 based quality management also includes a risk-based thinking, which is essential for achieving an effective quality management system for an institution. The concept of risk-based thinking has been implicit in this standard including, e.g., carrying out preventive action to eliminate potential nonconformities, analyzing any nonconformities that do occur, and taking action to prevent recurrence that is appropriate for the effects of the nonconformity.

Our presentation compares two risk analysis approaches implemented at the Universitat Autònoma de Barcelona and at the University of Eastern Finland. The UAB uses a more library process oriented model, whereas the UEF is utilizing the University's top-level approach in managing and analyzing risks. At the UAB, the university has been involved in the risk management at the general level for a long time. In addition, the library has made, based on the ISO standards, risk assessment focusing on the library processes. The UEF has been utilizing the university's risk assessment tools and procedures for managing and analyzing the library's own risks. We are comparing these two ways of making risk assessment at the libraries in order to find out the best practices for the academic library risk assessment to fulfill the needs of the modern risk management.

Keywords: academic libraries, risk management, quality management, risk assessment

References

- Andersen, Torben J. & Schrøder, Peter W. (2010). Strategic risk management practice: how to deal effectively with major corporate exposures. Cambridge, Cambridge University Press.
- Borghesi, Antonio & Gaudenzi, Barbara (2013). Risk Management: How to Assess, Transfer and Communicate Critical Risks. Geneva, Springer.
- Chapman, Robert J. (2011). Simple tools and techniques for enterprise risk management. 2nd ed. West Sussex, Wiley.
- ISO 31000:2018 (2018). Risk management: Guidelines. Geneva, ISO
- ISO 9001:2015 (2015). Quality management systems: Requirements. Geneva, ISO.
- Merna, Tony & Al-Thani, Faisal (2010). Corporate risk management. 2nd ed. West Sussex, Wiley.

A Complex Proposal: Meeting Information Needs in an Academic Library through Consultations and a Single Service Model

Claudia McGivney

Adelphi University, USA

Abstract: As academic libraries have shifted to accommodate the customized learning environment of today's higher education landscape, the reference desk model appears to be the lone holdout. Many aspects of academic librarianship have evolved to digital platforms and online interactions, but the majority of reference and research interactions remain tied to a traditional reference desk. Single-service points have been adapted at a number of institutions, and consultation models are emerging as an in-depth alternative to reference desk drop-ins. The complexity of research questions and specialized needs of differing academic departments lends itself to a liaison model that promotes consultation and partnerships over quick interactions that can be accommodated through implementing a single-service point. Data for reference desk transactions and scheduled consultations was reviewed to determine the specific needs of users and librarians for most effectively providing essential research services. This study used data from a private R3 institution in the northeast United States to inform a redesign of reference services to best suit complex student and campus community needs.

Keywords: reference services, single service point, research consultation, access services, user services

The Concept of Innovation for Library Practice in the Light of the European Union's Official Documents

Marta Grabowska

University of Warsaw, Centre for Europe, Poland

Abstract: The main aim of the paper is to answer the question: what the term “innovation” means in the context of the European Union’s legal system and its official documents as well as what role is it playing in the library practice? Innovation has been applied in the sphere of industry or technology as well as in the social and public spheres. The role of innovations in the public and social spheres was recognized much later than industrial and technological innovations but nowadays they both play equally important role. Libraries apply innovations of both categories and usually are pioneers. In the paper concepts of “industrial or technological innovations” vis-a-vis “social and public innovations” are discussed and presented. Mutual relationships between this two categories of innovations in library practice are discussed. For librarians in the European Union it is also important which provisions of the EU’s legal system, if any, play important role in this sphere of activity.

Keywords: innovation, industrial and technological innovation, innovation in social and public spheres, innovation in library practice, innovation in the EU's legal system

Connecting Puzzles' Pieces to Build an Action Plan for End User Education

Cristina Mancini, Annarita Barbaro, Monica Zedda

Istituto Superiore di Sanità – Library, Rome, Italy

Abstract:

Introduction: The Istituto Superiore di Sanità (ISS) library has always put great emphasis on the education of its users. In the last years end user education is becoming increasingly important in the daily biomedical librarians work: new technologies, databases, and innovative systems for accessing information, have made information retrieval more complicated and challenging for librarians and users alike. As a matter of fact, Internet gives great opportunities to researchers by making available a wealth of information not previously accessible, but ultimately places additional responsibility upon the librarian. We are becoming increasingly aware that, now more than ever, users need assistance with the retrieval of pertinent and meaningful information for their research needs.

Aim: As it is library's responsibility to provide better services to its users, it was decided to plan an articulate program of seminars covering the different library services to promote an effective use of technologies and library resources. A set of structured seminars is better than an invitation to occasional courses and is also one of the best methods to encourage the knowledge and use of new resources.

Method: Starting from a previous experience of end user training, a case study based on a seminars' cycle addressed to the internal user information needs is presented. Data were collected during 2018 utilizing a self-developed user satisfaction survey questionnaire realized in order to identify the real satisfaction level of our users and in order to improve our offer to meet their needs.

Results: The answer of the library users was unexpected; we received an average of 50 requests per seminar. The first cycle of seminars covered different topics, from general to very specific, such as law and a nurse databases, MESH and information retrieval

techniques, and open access and scientific information retrieval. The feedback from the satisfaction survey questionnaires received from each session was also useful for the development of following meetings. As an example, one of the most frequent requests we received from our users was the implementation of training materials and specific sessions to improve their skills in using the tools available.

Conclusion: We were surprised by the huge participation of our users to the seminars. We are thinking of setting up a “starter pack” course aimed to young researchers, post-doc, and students who can have the opportunity of a specific training path that makes them aware of how, where and when use information search techniques. We are also studying the possibility of establishing “training on demand” courses, to be tailored on the specific user needs. Based on our experience, we recommend a “learning by doing” approach, rather than a passive talking, where librarian results as a facilitator and not only as a teacher.

Keywords: user education, training courses, information literacy

A Content Analysis of Academic Library Job Advertisements

Kathy Rosa

EdD, MSLS Director, Library & Research Center (LARC), American Library Association, USA

Abstract: It's no surprise that rapid technological change and economic uncertainty have had an impact on the operations of academic libraries in recent years. Academic library jobs are one area that may reflect rapid changes. In this paper I will discuss the findings of a content analysis of job advertisements from academic libraries over a period of ten years, 2008-2018.

Previous literature includes a comparison of the number of jobs, types and titles, requested qualifications and skills, salary information, and locations of positions advertised in 2011 job advertisements with comparisons to 1996 and 1988 (1). New position titles were identified. A 2009 content analysis of over 1000 job ads for new LIS graduates found most jobs were in academic libraries and archives. It was revealed that team capabilities were highly desired. Additionally, personal attributes, including orientation, collaboration, cooperation, communication, and service were also sought. The skills most often requested included supervisory experience, IT skills, and experience with library automation systems (2). This study aims to update the findings of number of jobs, job titles, skills, experience required and personal attributes. The study results will be useful to faculty planning, employers and library job seekers.

References

1. Triumph, T. F. I. thtriumph@email.unc.edu, & Beile, P. M.. (2015). The Trending Academic Library Job Market: An Analysis of Library Position Announcements from 2011 with Comparisons to 1996 and 1988. *College & Research Libraries*, 76(6), 716–739. <https://doi-org.ala.idm.oclc.org/10.5860/crl.76.6.716>
2. Reeves, R. K., & Hahn, T. B. (2010). Job Advertisements for Recent Graduates: Advising, Curriculum, and Job-seeking Implications. *Journal of Education for Library & Information Science*, 51(2), 103–119. Retrieved from <http://ala.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,uid&db=lls&AN=502989130&site=ehost-live&scope=site>

Continuing Professional Development in Ugandan Public University Libraries: A Survey

Agnes Namaganda

Makerere University Library, Kampala, Uganda

Abstract: The paper reports on the current state of continuing professional development for professional librarians in Ugandan public university libraries. The reasons, benefits, methods and the role played by professional organisations are discussed. An online questionnaire was used to collect data from nine public university libraries in Uganda. Results indicate high levels of participation in both formal and informal learning activities. Financial constraints, lack of CPD opportunities, inadequate support from employers and lack of time are some of the barriers to participation in CPD. The study concludes that CPD is crucial for updating skills of information professionals. Employers and professional organisations have a vital role to play in the professional development of information professionals. The results have implications for the future development of information professionals in Ugandan academic libraries.

Keywords: continuing professional development, information professionals, academic libraries, Uganda

Creative Ways of Demonstrating Your Value Using a Library Dashboard

Marian Ramos Eclevia,¹ Minette R. Vinzon,¹ Yugosto A. Balbas,¹ and Rizalyn V. Janio²

¹De La Salle University, Philippines

²University of the Philippines Diliman, Philippines

Abstract: The study primarily aims to explore visualisation approaches used by libraries in visualising analytics to present their value and impact on the academic community. It attempts to investigate and answer the following research questions: (1) What are the current practices of academic libraries in data sharing and visualisation?; (2) What kinds of data are displayed on library websites and dashboards?; (3) How are the data visualised (tables, diagram, graphs, etc.)? This study is a descriptive survey research design and employed content analysis to examine the library websites of the top 500 universities based on QS World University Ranking 2018 and ascertain the presence of public-facing data and availability of library dashboards. Website investigation and capturing of web pages were conducted from September 2018 to March 2019. A total of 157 universities published their library analytics on the web. The majority of the libraries of top-ranking universities published their data online using textual facts and figures. Surprisingly, data show that only a few academic libraries around the world have developed their data dashboards. It implies that librarians have not taken full advantage of the benefits of data visualisation. Library data in dashboards are presented in a visually appealing and interactive environment using visualisation tools to provide clear insights to library patrons, university administrators, and accrediting agencies. Published library data include reference transactions, usage of services, collections and spaces, library visits (physical and virtual), numbers of eBooks, online journals, open access resources, and other collections, interlibrary and document delivery transactions, staffing, budget and expenditures, items checked out, library instruction sessions and attendees, equipment

loans, digital image documents, new acquisition, and digitization. Most data are text, numbers, and graphs, thus, not-interactive and real-time. The results of this study may prescribe best practices in communicating library data to its stakeholders, in which Filipino librarians may benchmark. Librarians can make better, more data-driven decisions to drive continuous improvement of library operations.

Keywords: library data, data dashboard, data services, data visualisation

Customer Value as a Key Concept for Enhancing the Customer Insight in Academic Library

Minna Niemi-Grundström

Tampere University, Faculty of Information Technology and Communication Sciences, Tampere, Finland

Abstract: The concept of customer value is commonly used in the literature on marketing and retailing to explain the competitive advantage of a successful product or service. Definitions of customer value vary a lot but common to all definitions is that the value is heavily linked with customer experience. Customer value is subjective, always defined from the customer's perspective and therefore it differs from one customer to another. However, several dimensions of customer value can be identified and by analyzing those dimensions an organization or a company can learn more about customers and can use that knowledge to analyze its own capabilities and resources to fulfill the customer needs. This understanding is vital when developing customer-oriented products and services.

The customer value is often a sum of many factors. For instance, the customer may value the service if it saves her time and is affordable. In this case, the customer value consists of functional and economic value. For organization the better understanding of customer value can result in better services and products but it also requires the change of mindset. Customer value is not something tangible but it can be found by thinking 'from outside inside'.

In my paper I will explore how the concept of customer value and its dimensions can be utilized in customer-oriented service design and management in an academic library. Knowing the customers and their needs is one of the most important success factors in service design. Understanding the different customers' objectives, wishes, habits and the problems of the everyday life better will give tools to the library to develop its services into a right direction.

I will use Tampere University Library as an example and will argue that the library needs to improve its ability to understand the changing needs of the customers. In the library it is easily thought that we already know so well the main customer groups (the students, teachers, researchers and other people in need of the scientific information) that it is easy to provide services that will meet their needs. However, we have not perhaps paid enough attention to the fact that the customers also live in the continuously changing environment in which especially the digitalization essentially alters working methods and the use of the information, among others things.

I will propose that by identifying customer value propositions a library can enhance the customer understanding and find new angles to evaluate and develop the services. It is a precondition for the successful service and operational development to understand what produces the value to the customers and what does not. Finally, one can state that always the mere understanding is not enough if for example the resources or know-how are not enough for the answering the needs. The critical examination is therefore

necessary also for those matters which can turn into a clear drawback for the customers instead of the advantage.

Keywords: customer value, customer understanding, academic libraries

References

- Rintamäki, T, Kuusela H., and Mitronen L., (2007). Identifying competitive customer value propositions in retailing. *Managing Service Quality*, Vol. 17 No. 6, 2007, 621-634.
- Rintamäki, T, Kirves, K. (2017) From perceptions to propositions: Profiling customer value across retail contexts. *Journal of Retailing and Consumer Services*, 37, 159-167.
- Åslund A. & Bäckström, I. (2017) Management processes and management's role in customer value creation. *International Journal of Quality and Service Sciences*, vol. 9, no. 2, 148-164.

Data Lake: Promoting a Home-Grown Mega-Tool for the Assessment Lifecycle

Sharon Shafer¹, Dana Peterman², Diane Mizrachi³, Todd Grappone⁴

¹Librarian, Head of Search and Assessment, Charles E. Young Research Library, University of California Los Angeles – UCLA, USA

²Librarian, Digital and Distinctive Product Manager, Charles E. Young Research Library, University of California Los Angeles – UCLA, USA

³Ph.D., Social Sciences Librarian, Interim Librarian for Jewish and Israel Studies, Charles E. Young Research Library, University of California Los Angeles – UCLA, USA

⁴Associate University Librarian for Digital Initiatives and Information Technology, Charles E. Young Research Library, University of California Los Angeles – UCLA, USA

Abstract: A recently created Library Strategic Plan at the University of California Los Angeles (UCLA) identified the need to integrate a culture of assessment throughout the organization in order to encourage more data informed decision-making processes. Our Assessment for Change Team (ACT) was formed and charged with spearheading this cultural evolution. This case study will discuss the development of a home-grown tool that assists with assessment brainstorming, and acts as a central repository for assessment products – the Data Lake.

The UCLA Library consistently ranks among the top academic libraries in the United States serving 45,000 students in 125 majors. It employs approximately 100 librarians and 350 full-time staff working in more than a dozen library locations all over campus. Library units report to the University Librarian through her four Associate University Librarians and management staff.

Data Lake is an enterprise wide collaboration platform used for managing change and an assessment culture within the Library. First, a guided questionnaire assists with brainstorming and planning of assessment ideas while invoking dynamic reports and notification of resource managers at critical points within the assessment lifecycle. Next, the platform enables abstracting, indexing and storage of raw data and assessment tools while supporting dynamic visualizations, reports and dashboards. Finally, connections with service tickets and project plans are promoted as assessment plans morph into reports and data informed decisions to launch or change projects.

We see our greatest challenge as managing and maintaining one solution as an organization's assessment systems and data holdings expand. As much data is sensitive and subject to privacy issues and access restrictions, it is necessary to ensure a data management policy is in place and being followed. Management and governance of data assets requires oversight and maintenance of permissions and data retention policies as well as addressing the technical debt of maintaining connections and policies with external systems such as BOX for use as a true large data repository.

Data Science: A New Field and a Curriculum Proposal

Renato Rocha Souza

Associate Professor, Graduate Program in Knowledge Management and Organization, School of Information Science, Federal University of Minas Gerais; Getúlio Vargas Foundation, Brazil

Abstract: Data science interacts deeply with the social reality and presents itself as a new scientific area resulting from the combination of existing and consolidated areas such as mathematics, statistics, information science and computer science, among others. Any proposal for graduate or undergraduate courses in Data Science should address multiple possibilities of applying the knowledge in the everyday life, interacting synergistically with other fields of science and socioeconomic activities. We believe that the differential of a course proposal in this area is to provide a solid theoretical-mathematical foundation, while at the same time creating the chances for the graduates to present professional profiles in line with the job market. This issue becomes particularly relevant in an area, such as information science, whose tradition has been to train only professors and researchers pursuing academic career. The skills and competences acquired during the education of the data scientist, such as logical reasoning, critical posture and problem-solving skills make him or her a professional capable of occupying positions in the labor market outside the academic environment in areas in which abstract reasoning is an indispensable tool. Today there are ample opportunities, especially in technology-producing countries, for the data scientist, who can develop a myriad of activities in contemporary society. This proposal is a preliminary manifesto in this respect. Contrary to the need to have ever more flexible formations to respond to the rapid changes in technology, there is an almost parochial structure in some information science courses, which respond to the market delimitation advocated by some entities and professional councils, seeking excessive regulation and rights to professionals with specific degrees. In this sense, graduates in Data Science sought to occupy a place of competences that resembles the engineer, the computer scientist, the information scientist, the statistician, and the analyst in general, answering to new demands in a complex and ever changing environment.

Keywords: data science, information science, curriculum

Designing New Services in Libraries: Rethink Consultation Workshop

Raphaëlle Bats¹, Benoît Epron², Christine Michel³

¹Université Paris Cité, Université Paris VII, Diderot, LCSP + Univ de Lyon, Centre Gabriel Naudé, Enssib, France

²HEG Genève, Switzerland

³Université de Lyon, INSA de Lyon, Laboratoire LIRIS, France

Abstract: The organization of a program of cultural activities in a public library requires librarians to take on specific roles, such as the not often played role of linking the knowledge produced during the activities and the knowledge already accessible in the collections (Bats, Epron et al., 2018). Many of them develop an increasingly consequent program of participatory activities (Jochumsen, 2012; Bats, 2015). Participants, users or inhabitants, are so involved in collective manual, technical or intellectual achievements like feeding a collaborative map or Wikipedia page, writing various documents, creating tutorials, etc. The question of the management of these various productions (documentary or not, digital or not) with or in parallel of the

libraries' collections seems more accurate than ever. The place of these activities in library spaces and collections is in the heart of the research project's work, PLACED, funded by the European Union and led by an international team of researchers associated with public libraries. The project aim is to develop two demonstrators: PARTICIPATE (Gröschel, 2018), for the collection of knowledge produced during activities, and EXPLORE, for their integration and visualization inside the spaces of libraries. To support the realization of these prototypes, it is necessary to analyze, beyond the situations of the partner libraries, the breakdowns and facilitators to the valorization of these collective productions within the library. Thus, we organized a workshop with 99 French librarians assembled for the annual conference of the French Librarians Association (ABF), in June 2018 (Bats, Epron, 2018.2). This workshop gave us the opportunity to question them on the becoming of this knowledge produced in participatory activities in their own libraries.

We built this workshop with a method alternating between individual statements and collective exchanges around three practical cases of integration of knowledge produced collectively within the collections and / or spaces of the library. In this communication, we want to present this method, defined for avoiding some difficulties often met in this kind of workshops, focused on consultation of professionals.

1/ These workshops often lead to the absence of the speech of people less comfortable in oral expression (Participations, 2014, Berger-Charles, 2014). The alternation between individual expression and collective expression allows the real participation of all.

2/ The consultation workshops often remain "useless" times for the participants, who feel that they do not gain anything (Nez, 2012). The alternation between enunciation time and debate time allows participants to derive immediate benefit from the workshop without waiting for the researchers to process the results.

3/ The collective workshops bring out narrations/storytelling, which can easily be considered very anecdotal (Charles, 2012; Berger, 2012). The alternation between expression time and voting time makes it possible to give more weight to certain experiences, which are no longer so anecdotal as more or less the reflection of the general activity of libraries and thus makes it possible to measure the real importance of the key factors of success or blockage as stated by librarians. This methodology allows us to obtain useful data to go further in the building of our tools of valorization and legitimation of the knowledge produced collectively in our public libraries.

Keywords: participatory, libraries, activities, design, collections

References

- Bats, R., Epron B. 2018. Documenting activities in Libraries: Designing an interface to link collections and activities. QQML Proceedings, 2018
- Bats Raphaëlle, Epron Benoît (2018-2), Atelier "Documenter les activités participatives", Congrès ABF 2018, La Rochelle, 7 juin 2018.
- Bats, R. (dir) Construire des pratiques participatives en bibliothèques, Presses de l'enssib, Villeurbanne, 2015
- Berger, M. (2012). La démocratie urbaine au prisme de la communauté, Making Community Happen. Participations, (4), 49-77.
- Berger, M., & Charles, J. (2014). Persona non grata. Au seuil de la participation. Participations, N° 9(2), 5-36.
- Charles, J. (2012). Comment la cartographie méconnaît les habitants, How Cartography Misreads the Inhabitants. Participations, (4), 155-178.
- Gröschel, C., Dalsgaard, P., Klokmose, C. N., Korsgaard, H., Eriksson, E. Bats, R., Tabard, A., Ducros, A. & Serholt, S. 2018. PARTICIPATE: Capturing Knowledge in Public Library Activities. CHI EA '18: Proceedings of the 2018 CHI Conference Extended Abstracts on Human Factors in Computing Systems. Association for Computing Machinery (ACM).
- Jochumsen, H., Hvenegaard Rasmussen, C., & Skot-Hansen, D. (2012). The four spaces – a new model for the public library. *New Library World*, 113(11/12), 586-597. <https://doi.org/10.1108/03074801211282948>
- Les limites de l'inclusion démocratique. (2014). Participations, 2(9), 278.
- Nez, H. (2012). Délibérer au sein d'un mouvement social, Deliberating in a Social Movement. Participations, (4), 79-102.

Developing a Sustainable Platform for Open Access Publishing in Armenia

Tatev Zargaryan¹, Ane Landoy², Angela Repanovici³

¹American University of Armenia, Armenia

²University of Bergen, Norway

³Transilvania University of Brasov, Romania

Abstract: In 2017 two Armenian universities with the support of the University of Bergen have decided to team up within a project called “Developing a sustainable platform for open access publishing in Armenia”. The goal of the project is to raise awareness about OA publishing and help the Armenian researchers to be published in OA journals. The output of the project will be two developed institutional repositories and sustainable mandates for OA publishing.

The idea of openness and free access to the research articles is both exciting and troubling. Exciting since any research posted online on the web will be visible all around the world. It can be shared and read by others. Troubling because sometimes the reliability of the institutional repositories where research is stored is unknown. This may make researchers fear publishing their research in OA journals.

This article will present the analysis of the OA survey results conducted, within the frame of the project “Developing a sustainable platform for open access publishing in Armenia”, with these two university researchers, and will review and give recommendations on the developed OA policies and mandates, established Institutional Repositories (IR), acquisition models and specific IR collection development strategies.

Developing an Informed, Educated and Empowered Citizenry: The Role of Libraries, Librarians and Educators

Godwin Nwachukwu Arua¹, Celestine Onyebuchi Eze², Ginika Ezeana³, Helen Obioma Ukwuaba⁴

¹Chief Librarian,

²Deputy College Librarian,

³Assistant Librarian,

⁴Senior Librarian,

Enugu State College of Education, (Technical) Enugu, Nigeria

Abstract: Information is at the core of education and that it has a democratic, liberatory power that will give all members of the society the equality of access to the society’s power. We find ourselves in a rapidly growing and complex digital environment which has in turn increased our dependence on information. Modern society can develop if people acquire competencies of a reasonable and responsible handling of new technologies. The libraries, librarians, and educators have important role to play in this context. Providing the right information to the right persons at the right time is the key to the success of any in institution. Information literacy lies at the core of lifelong learning. Information literacy enables people to interpret and make informed judgments and decisions as users of information sources and to become producers of information in their own right too. Transforming all levels of education and moving beyond the boundaries of information literacy as a library only issue, librarians, educators, and

administrators must continue to develop tools of collaboration and communication about information literacy in the context of teaching, learning and research. This is the thrust of this paper.

Keywords: information literacy, libraries, librarians, educators, empowerment, informed citizenry

Developing Creative “Spaces” in Libraries for Creative Tourism

Charilaos Lavranos, Petros Kostagiolas, Christina Vouvaki-Manousaki

Department of Archives, Library Science and Museology, Faculty of Information Science & Informatics, Ionian University, Corfu, Greece

Abstract: Tourism is an interdisciplinary, economic and social phenomenon, directly linked to the promotion of cultural heritage. Creative tourism involves the active participation of the visitor in various cultural activities, contributing to the enjoyment of the tourist experience from the perspective of experiential interaction, as well as linking tourism to the economic, social and cultural development of a destination. Through creative tourism activities and interactive participation in cultural actions, visitors have the opportunity to develop their creative skills. Libraries, as organizations that are linked to the promotion of cultural heritage of a place, present opportunities to take part in the actions of creative tourism developing creative spaces for tourism purposes. This paper focuses on the presentation of creative tourism innovative activities related to the promotion, diffusion and their integration in the function of libraries through the development of creative “spaces”. Through this work we strive to better understand how libraries as creative “spaces” provide opportunities for many forms of cultural participation, especially in the tourism sector, developing creativity in tourist experiences. The significance and originality of the current study reside in exploring the interrelations of creative tourism facets to libraries’ function.

Keywords: libraries, creative tourism, creative “spaces”, creativity

Developing Interdepartmental Relationships to Assess Undergraduate Information Literacy through TATIL

**Cristina Colquhoun, Kathy Essmiller, Holly Luetkenhaus, Adam Stroud,
Matt Upson**

Oklahoma State University, USA

Abstract: The purpose of this presentation is to describe the development of collaborative efforts between the English Department and the Research and Learning Services Department within the Edmon Low Library at Oklahoma State University. This presentation details both “how” and “why” the respective departments sought to support each other in the assessment of undergraduate students regarding information literacy. Throughout this collaborative effort the Threshold Achievement Test for Information Literacy (TATIL) was chosen as the assessment method to be implemented in the Fall of 2019. This presentation details the selection process in choosing TATIL as the tool for assessment and how it aligns with already ongoing instructional efforts and current curriculum design. Additionally, this presentation describes potential future research studies and possible impact on current knowledge bases concerning undergraduates and information literacy.

Development of an Individual Work Performance and Work Design Questionnaire

Mohd Faizal Hamzah¹, Mohamad Noorman Masrek², and Irwan Kamaruddin Abdul Kadir³

¹University of Malaya (Kuala Lumpur), ^{1,2&3} University of Technology MARA, Malaysia

Abstract:

Background – Based on the literature search, the number of instrument consisting of work performances and work design are very limited in library science fields. Previous research also believed that knowledge about work design is very limited among the librarian. Therefore the instrument to measure work design and work performance is almost non-existence in library fields. Hence, the objective of this study is to propose a set of questionnaires to measure work performance and work design at the individual level. The questionnaire was developed based on 1) two dimensional of work performance dimension namely, task performance, and contextual performance, 2) two dimensional of work design dimension consisted of task character and knowledge characteristic and 3) a set of core competencies for the librarians. **Methodology** – the instrument used for this study is a questionnaire. The items in the questionnaire were developed based on the proposed conceptual framework of the previous study. To report content validity for the instrument, the researcher conducted several pre-testing sessions to evaluate the instrument. After pretesting the instrument, 326 respondents were involved during the pilot test session of the instrument. The data were analyzed using SPSS to identify the Cronbach's Alpha value and inter-item correlation value for each of the items. The reliability of the instrument was reported in the table. **Findings** – the feedback from experts during pre-testing were analyzed and the amendment was made to suit the local setting of the respondents. The Reliability of the proposed instrument was identified. Based on the inter-item correlation value, several items have been removed. The instrument proposed can be used to measure work performance and work design in any library.

Keywords: work performance, work design, questionnaire, work design, and work performance instrument

Development of Libraries and Library Science Education in Peshawar-Khyber Pakhtunkhwa, Pakistan: A Historical Review

Dr. Saeed Ullah Jan¹, Prof. Dr. Teresa S. Welsh²

¹Chairman, Department of Library and Information Science, Khushal Khan, Khattak University Karak, Pakistan

²Ph.D., Professor and Director, School of Library & Information Science, University of Southern Mississippi, USA

Abstract: The history of Library and Information Science in Pakistan is traced back to the arrival of W. A. Broaden and Asa Don Dickinson to Sub-continent in 1911 and 1916 respectively. This piece of document tends to explore the history of library and library science education, library activities and role of professional associations in promotion of library culture in North-West part of Pakistan. This study is basically historical in nature. The paper is broadly divided into three parts that is Library Science education, Library developments through ages and Library Associations and their role

in the promotion of libraries in Khyber Pakhtunkhwa. Efforts were made to elaborate the growth of libraries in different eras over the passage of time. The role of Muslims and British in the promotion of library culture is also discussed. It is reflected that both nations have made no stone left un-turned for the establishment of libraries in this part of sub-continent. It is also evident from the pages of history that the introduction of Library and Information Science education was not that late here as compared to the rest of the world. University of Punjab is the third in the race of ranking after Germany and United States to offer this program. Various associations had also played their roles in this regard. They had worked hard for the promotion of library culture. The role of Pakistan Library Association (PLA) is vigilant and praise worthy in the said context. It is concluded that future of libraries and their education is bright in Khyber Pakhtunkhwa as library schools, senior professionals and associations are playing their due role with zeal and favor.

Keywords: library activities- Pakistan, library history- Khyber Pakhtunkhwa, library activities-Khyber Pakhtunkhwa, library science education-KP, library associations-Khyber Pakhtunkhwa

Digital Deep Dives into Swedish Municipal Libraries: A Case Description

Arja Mäntykangas

PhD in Management, Senior Lecturer, the Swedish School of Library and Information Science, Borås, Sweden

Abstract: A current renewal project involving a number of municipal libraries in western Sweden is described here. The project is designed to prepare libraries for the future in digital society. How was the renewal project initiated and how has it been implemented as a technological process? What sorts of gains and challenges have arisen? Some of the main points that emerged from an interview with the project leader are presented. The key concepts involve *renewal*, *multiple approaches* and *knowledge sharing*, suggesting ways to implement new technology. Further, agile organizations as possible touchstones of future library development are discussed.

References

- Aghina, Wouter & De Smet, Aaron & Lackey, Gerald & Lurie, Michael & Murarka, Monica (2018) The five trademarks of agile organizations. At: <https://www.mckinsey.com/business-functions/organization/our-insights/the-five-trademarks-of-agile-organizations>
- Cram, W. Alec & Marabelli, Marco (2018) Have your cake and eat it too? Simultaneously pursuing the knowledge-sharing benefits of agile and traditional development approaches. *Information & Management*. [Online] 55 (3), 322–339.
- Harris, Jennifer & Cooper, Chris (2015) Make room for a makerspace. *Computers in Libraries*. 35 (2), 5–9. [online].
- Groenendyk, Michael & Gallant, Riel (2013) 3D printing and scanning at the Dalhousie University Libraries: A pilot project. *Library Hi Tech*. [Online] 31 (1), 34–41.
- Moorefield-Lang, Heather M. (2014) Makers in the library: case studies of 3D printers and maker spaces in library settings. *Library Hi Tech*. [Online] 32 (4), 583–593.
- Moorefield-Lang, Heather M. (2015) Change in the Making: Makerspaces and the Ever-Changing Landscape of Libraries. *TechTrends*. [Online] 59 (3), 107–112.
- Sjödín, Anna (2018) Digital teknik tar plats på biblioteken. [Digital technology assumes a central role in libraries] *Borås Tidning*, June 20.

Digital Document and Collection Analysis Using Qualitative and Quantitative Methods Based on FADGI- and Library Standards Guidelines

Rita Radó

National Széchényi Library and Institute of Library and Information Science, ELT, University, Budapest, Hungary

Abstract: Evaluation is the best tool to learn and understand a system. However, evaluation and operational research have certain processes and methods. Ideally, the evaluation culture is incorporated into all the activities of the library. The findings of different methods can be divided into quantitative and qualitative data, but most methods can produce both types of data. Because of its complexity, the use of qualitative and quantitative methods (QQM) became increasingly popular. The use of this complex system can also help librarians rethink the traditional library principles in a fast-moving world; the IFLA trends are also a great help for this. In this study I analyzed The Electronic Periodical Archives and Database (EPA) with the above-mentioned performance indicators. EPA is edited, developed and operated by the E-Library Services Department of the National Széchényi Library (OSZK). It is an archive managing, equipped with source and location registration system of electronic periodicals, and also a national web site database operated by the OSZK. (1)

The primary purpose of digitizing the National Széchényi Library (OSZK) collection is to "*provide authentic source material for scientific research*". (2) Secondary aim, however, is to "*develop other services based on authentic digital corpus*". (3) It is an ongoing matter of reflection, what technical means and by which set of rules will provide credibility and authenticity. Within the frame of the IT renewal project the OSZK defined the quality requirements for image files produced by digitization (or received from external institutions). For this we have taken the FADGI guidelines into account. FADGI Star System is a very good example of how we can achieve higher quality results by developing and applying quantitative units, whose long-term effects appear on user satisfaction indicators, directory service policy, contribute to improved scientific research results for users, and improving their competence by providing them with a higher quality level of digital documents.

Descriptions of these methods and indicators are also included in the library standard for uniform use and for effective results. (ISO 11620: 2014 Information and documentation - Library performance indicators. (4) and ISO 16439: 2018 Information and Documentation: Methods and Procedures for Assessing the Impact of Libraries. (5).

Digitization is an opportunity and a task for libraries at the same time. From a quantitative and qualitative point of view, it is necessary to analyze the very complex and diverse workflow system that enables the creation of efficient, user-friendly electronic services.

(1) The Electronic Periodical Archives and Database

<http://efolyoirat.oszk.hu/static/politikank.html> – [2018.11.28.]

(2) Szabolcs Dancs: Authentic digital copy and bibliographic management of copies - Part 1: Authenticity on a standard basis. In: Book, Library, Librarian 10. (2010) p.7-15.

http://epa.oszk.hu/01300/01367/00295/pdf/EPA01367_3K_2017_10_007-015.pdf [2018.11.21.]

(3) Dancs 2010.

(4) The ISO 11620: 2014 standard was adopted by the National Széchényi Library under the National Library System project. The National Library System Project is the IT Development Project of the National Széchényi Library, for which the Government allocated funding in the 1605/2016. (XI.8.) Government Resolution. Estimated completion date: March 2019.

(5) ISO 16439:2018 Information and documentation. Methods and procedures for assessing the impact of libraries

Keywords: digitization, library standards, National Széchényi Library, Electronic Periodical Archives and Database, FADGI Star System, performance indicator, impact of libraries

Digitizing National Records of Jordan: Reality and Challenges

Prof. Dr. Raid Suleiman

Department of Library & Information science, Al-Hussein Bin Talal University (AHU), Jordan

Abstract: The study was determined the reality of electronic archiving in the Jordanian National Library, the study discussed the problems and challenges that the library faced. The main results of the study were:

Laws and regulations of Jordan documents Is still not at the required level, especially at the present time in the digital age.

-challenges of physical space and virtual space

- Lack in Supervising and controlling all documents produced by ministries because there is no central system for document preservation, and library systems did not meet Integrated Archiving System to controlling all documents in Jordan stats and its ministries and in privet sectors

Keywords: digital archiving, national records, Jordan Library

Documents as Data: Harvesting Knowledge from Textual Resources with DADALytics

**Sarah Ann Adams¹, Mary Mann¹, Rose Gold¹, Ilaria Della Monica²,
M. Cristina Pattuelli¹**

¹Pratt Institute, School of Information, New York, NY, USA

²Harvard University Center for Italian Renaissance Studies, Villa I Tatti, Florence, Italy

Abstract: We intend to discuss the development and assessment of DADALytics, a semantic tool recently created by the Semantic Lab at Pratt to help librarians, archivists and humanities scholars generate linked data from textual resources and descriptive records. We will describe the overall design of the tool, discuss how input from representatives of its intended community of users has informed design decisions, outline the methods adopted to make the tool intuitive and flexible, and detail the ongoing assessment activities conducted through piloting and testing. The development and evaluation of DADALytics will be contextualized within a real-world scenario provided by the collection of personal diaries of Mary Berenson, part of the Bernard and Mary Berenson Papers (1880-2002) held at the Berenson Library at the Villa I Tatti in Florence. Semantic technologies such as linked data have become increasingly popular in the Library, Archives and Museum (LAM) community as a powerful means to enhance the visibility, discoverability and use of digital resources, beyond the boundaries of institutional repositories and across heterogeneous domains. It is no longer necessary to advocate for the value of applying linked data in the area of digital libraries and archives. Not only is it understood, but there is a sense of urgency among cultural heritage institutions to adopt linked data technologies. The greatest obstacle today is the availability of easy-to-use tools and the technological know-how needed to actually do it. The major driver behind the creation of DADALytics was the need for an intuitive data service that significantly lowered the barrier to generating and publishing high quality linked data. The aim is for every librarian, archivist, museum professional

and digital humanities scholar to have the ability to contribute to the linked open data environment, offering unprecedented opportunities to advance scholarship and create new knowledge. With funding from an IMLS National Leadership Grant for Libraries, DADALytics is designed as a modular linked data service with one component to perform named entity recognition and extraction and another devoted to name resolution and, in case of ambiguity, reconciliation through the use of name authorities (more details are available on the project's webpage <<https://semlab.io/projects/#dadalytics>>). DADALytics was tested on a corpus of documents of various types, from finding aids to transcribed oral histories. A pilot was conducted using the Mary Berenson's archival collection. Mary Berenson (Philadelphia, PA 1864-1944 Florence, Italy) was an art historian, critic and wife of Italian Renaissance art historian Bernard Berenson. While she worked in the shadow of her more renowned husband, Mary is now credited with having had significant influence over his scholarly work and having been instrumental in developing the rich social circle of intellectuals, artists and art collectors that surrounded the couple during the years spent at their residence Villa I Tatti, now The Harvard University Center for Italian Renaissance Studies. Mary Berenson's archive, a rich collection of letters, personal diaries, literary journals and notes (both published and unpublished), is a trove of primary sources with enormous historical value that has yet to be fully explored. The application of linked data techniques to the content of these textual documents offers unprecedented opportunities to reveal the complex web of Mary Berenson's social and cultural relationships and to create new paths of discovery and engagement with the archive. The DADALytics Mary Berenson pilot was conducted in the summer of 2018 on a diary of her first trip to the United States from 1903-1904. The diary is forty-three pages long and provides a suitable use case for the richness of entities mentioned including people she met, artworks she viewed, music she listened to, cultural and social events she attended and places she visited. The ability of DADALytics to detect entities in a comprehensive and accurate way was tested on this document through a comparison between instances manually annotated by two researchers and those automatically recognized by the tool. A detailed discussion of this pilot, including methodology and test results, will be included in the presentation.

Eastern European Experiences with Consortia of Universities, Research Institutes and Libraries: Romanian Chapter

Ivona Olariu, PhD

Association of Universities, Research and Development Institutes, and
Central University Libraries in Romania "Anelis Plus", Carol I no.11 Blvd, Iasi, Romania

Abstract: Starting in 2011 as a professional and scientific consortium, Anelis Plus Association mission is to fulfill its members' information and documentation needs, to assume research and development activities, and provide scientific electronic resources (ER), to undertake the promotion and study activities necessary of the implementation of the educational and research policies, so as to answer the growing information needs of the Romanian academic community. The Association also supports the scientific research and education through various projects with the purpose of increasing cooperation national and international level.

In the last years, the Romanian academic and research community has had continuous access to an increasing number of info-documentary ER, through projects like Assuring

national electronic access to scientific literature for supporting and promoting the research and education system in Romania, developed by Anelis Plus Association (2013-2016). The results obtained during this period have been used for the development of a new project for the following 5 years. Project "Anelis Plus 2020" has been taking place, being co-funded by the European Regional Development Fund through Competitiveness Operational Program 2014-2020. Its main objective is to increase Romania's Research-Development-Innovation capacity; Anelis Plus 2020 will increase the involvement of the research environment in international specialized research networks of major importance for the evolution of science and technology and will contribute to the development of an appropriate information infrastructure to support complex research. One of the main outcomes of the project will be the development of a national repository of scientific papers, in order to support research, innovation and stimulation of scientific production at national level.

In this paper, the impact of the two projects is evaluated from 2 different perspectives:

1. Analysis of databases and scientific journal platforms usage, at national level, through studying the dynamics of performance indicators PI (2013-2018) according to ISO 11620:2014 (quantitative analysis); the values of the PI calculated for the two projects (the second being ongoing) are analyzed comparatively.

2. Development of a case study regarding scientific performance of each member participating in the projects. The study revealed a correlation between the access to the scientific ER (given by number of downloads/user) and the quantity/quality of Romanian scientific literature output by interpreting the data extracted from the last 10 years of bibliometric databases (Web of Science and Scopus); the position of each institution in the ranking of the 88 that were analyzed with respect to the total number of citations between 2009-2017 of the papers published in the indexed journals.

The number of Romanian scientific publications increased over 4 times, in the analyzed period, due to factors such as the existence of a research strategy containing clear objectives regarding international scientific exposure. The assessment of the scientific research showed an increase in the number of citations per paper. These results highlight not only improvements in the quantity of publications, but also the maturation of the research community. Thus, the bibliometric indicators regarding the scientific performance of each institution show a proportional increase with the number of hits. All in all, it can be demonstrated that the ascending scientific output has been vitally influenced by the access to ER.

In the second part of the paper, the national repository containing scientific literature (e-journals archives and e-books since the first available number, from important publishing houses, but also papers resulting from Romanian research) is presented.

Although the usefulness of an association such as Anelis Plus was known from the experience of the other European countries, the activity of the consortium since 2011 demonstrates that such an associative structure has a growing role in the life of the scientific community in a country like of Romania: it increases the participation and visibility in EU research, it facilitates links with research structures within the international environment and supports the elaboration and implementation of a national strategy of information and documentation. Moreover, Anelis Plus has all the chances of becoming a national contact point for promoting open access principles. Nevertheless, the success of all these initiatives is predicated on the involvement and expertise in LIS of the specialists from the Association.

Keywords: electronic scientific resources, scientific research, Anelis Plus Association, bibliometric indicators, European funding projects

Embedded in a 4th year Business Course

Britanie Wentzell

Acadia University, Vaughan Memorial Library, Canada

Abstract: In January 2016, Britanie Wentzell, the newly appointed Business Librarian, joined Dr. Ryan MacNeil's fourth year Small Business Management course, as a co-instructor, to assist with teaching information literacy skills to students. Ryan and Britanie have co-taught the Small Business Management course for four years; adapting and improving the course each term. Britanie will discuss how and why this partnership began, the benefits to students having an embedded Librarian in the classroom, her experience as a co-instructor, how the course has evolved and what it looks like today, as well as, future research plans surrounding the course.

Keywords: embedded librarian, business librarian, information literacy, research, academic library

Emerging Challenges of University Libraries in Nigeria in the 21st Century

Godfrey Shaibu Ameh

College Library, Federal College of Education Eha-Amufu, Enugu, PMB 200, Enugu State, Nigeria, West Africa

Abstract: This study examined an in-depth study and possible solutions to the various challenges associated with university libraries management at the dawn of the 21st century that affects the levels of expectations in terms of service delivery to their numerous clientele. It identifies that the university libraries in Nigeria are currently facing myriad of management challenges linked to absence of regulatory framework governing the establishment of university libraries, non implementation of the statutory 10% annual allocation for the funding and management of the libraries. Although this paper is purely theoretical in design but discovered that paucity of funds, human resources and infrastructural facilities are the major challenges facing University libraries in Nigeria. It was recommended that the committee of University Librarian should pursue vigorously the various library reforms that was kicked started in 1972 if they are to meet the exigencies of the 21st century information driven society and the Librarian Registration council of Nigeria should pursue enforceable law that will ensure that the 10% annual allocation to university libraries are honoured in practical terms.

Keywords: academic, challenges, libraries, university, 21st century

An Empirical Study on E-learning in Higher Educational Institutions of Bangladesh

Dr. M. Nasiruddin Munshi & Nazmus Sakib

University of Dhaka, Bangladesh

Abstract:

Purpose – The main purpose of the study is to describe the present condition of e-learning in higher educational institutions of Bangladesh. This study has also focused on the E-learning which is the fundamental approaches of higher educational institutions to integrate E-learning in educational delivery and support system. To explain the existing situation of total 132 university libraries have been explored,

literature were reviewed, librarians were interviewed and finally primary and secondary data were collected from the repository administrators of 14 university libraries of Bangladesh which are functioning e-learning in higher education. To identify the e-learning technologies which are available, accessible and useable in our environment and to suggest e-learning variables and guidelines for Bangladesh in general on the basis of global literature and local environment by using the authors' practical experiences and keen observations. The study has examined possible opportunities and challenges in the implementation and use of e-learning at higher educational institutions of Bangladesh. The findings of the empirical study revealed that ICT playing instrumental role in the teaching and learning practices in Bangladesh. By focusing on new demands of the students, teachers and researchers, the higher educational institutions can change their service pattern and by doing so, are expected to have a better opportunity to survive the coming decades.

Empowering People with Essential Healthcare Information: A Prerequisite for the Global Sustainable Development Goal on Universal Health Coverage

Neil Pakenham-Walsh¹, Octavia-Luciana Madge² and Geoff Royston³

¹Coordinator of the HIFA campaign (Healthcare Information For All) and Co-director of the Global Healthcare Information Network, UK

²Associate Professor, PhD, University of Bucharest, Faculty of Letters, Department of Communication Sciences, Romania

³Independent health analyst and researcher, former Head of Strategic Analysis and Operational Research in the Department of Health for England, and past President of the UK Operational Research Society, UK

Abstract: For many of us nowadays information seems to be available and accessible at any time and at any place. The advance of communication technologies has brought easier ways of accessing information as well as the possibility of developing large digital repositories of information. However around the world there are still many areas and population groups experiencing difficulties in getting the right information at the right time. This is particularly important when talking about healthcare information, which can be literally life-saving. Strong collaborations and partnerships between health workers, librarians and information professionals, publishers, researchers, policymakers can improve access to healthcare information and sharing of healthcare knowledge. HIFA is such a collaborative endeavour - a global health network of more than 18,000 members in 177 countries - and this paper will highlight its strategy and projects. It will focus on challenges in the availability and use of healthcare information, particularly for citizens and healthcare workers in lower and middle income countries, argue that universal access to healthcare information is a prerequisite for achieving the Global Sustainable Development Goal (SDG) on Universal Health Coverage, propose pathways towards such access, and suggest how measuring its attainment could be included in the progress indicators for the SDGs.

Keywords: access to information, healthcare information, HIFA, Universal Health Coverage, Sustainable Development Goals

Evaluating the School Library Learning Environment

Barbara Schultz-Jones¹ and Cynthia Ledbetter²

¹University of North Texas, USA

²University of Texas at Dallas, USA

Abstract: The school library learning environment is often referenced as a domain that has components similar to the classroom environment (Ballard, 2010, p. 77); instruction and learning are integral to school library programs. Tools that enable constructive assessment of the learning environments associated with these programs could enable improvement of teaching methods and relationships between students and school librarians. The contribution of the school library to student achievement can be demonstrated with statistical measurement and correlation to measured results, alongside user-reported evidence showing “that the learner changes as a result of inputs, interventions, activities and processes” (Todd, 2015, p. 9). The impact of the learning environment itself could be assessed to strengthen the domain and suggest areas for intervention.

A notable number of evaluation instruments have been developed from the foundational work of research on behavior by Lewin (1936) and Murray (1938). In response to the need to assess innovative classroom environments, the *What Is Happening In this Class?* (WIHIC) was developed for secondary schools with a psychological view of learning that focused on students as co-constructors of their own knowledge (Aldridge, Fraser & Huang, 1999; Dorman, 2003), as was the primary and middle school instrument *My Class Inventory* (MCI) (Fraser & O’Brien, 1985). The *Technology-Rich Outcomes-Focused Learning Environment Inventory* (TROFLEI) is used to evaluate the integration of technology in terms of changes in the learning environment (Aldridge & Fraser, 2008; McDaniel & Fraser, 2014). The purpose of these evaluation instruments is to determine how individuals and groups of individuals react to their environment; to investigate what factors can affect their reaction to the environment; and to explore associations between the environment and student outcomes (Moos, 1974; Tobin & Fraser, 1998; Walberg & Anderson, 1968). The applicability and validity of these questionnaires to an examination of the classroom learning environment has been firmly established.

Evaluation of the school library learning environment has been investigated through the use of adapted versions of the classroom learning environment instruments (Schultz-Jones, 2011; Schultz-Jones & Ledbetter 2009, 2010) and the introduction of a dedicated inquiry instrument for the school library learning environment, *How My Library Supports Inquiry* (HMLSI) (Schultz-Jones & Ledbetter, 2013) that measures student perceptions of seven psychosocial factors prevalent in the school library.

Development and validation of the HMLSI is described along with research results from the application of this instrument to a variety of school library learning environments in Moscow, Russia; Stuttgart, Germany and Plano, Texas, USA. A discussion of the results is presented, calculated using the *t-test* for analysis of two samples assuming unequal variances and the paired samples *t-test*, with the effect sizes of the comparisons included. A second application of data analysis using *Pearson r* for a correlation among the scales measured by the HMLSI and a correlation with the results of the standard state tests is also included. Subsequent interventions are detailed and lessons learned are presented along with research plans to extend the use of evidence-based practices through a shared understanding of the goals for a school library learning environment.

Keywords: learning environment, school library, interventions, evaluation instruments, evidence-based practice

References

- Aldridge, J. M., & Fraser, B. J. (2008). *Outcomes-focused learning environments: Determinants and effects* (Advances in Learning Environments Research series). Rotterdam: Sense Publishers.
- Aldridge, J.M., Fraser, B.J., & Huang, T-C.I. (1999). Investigating classroom environments in Taiwan and Australia with multiple research methods. *Journal of Educational Research*, 93(1), 48-63.
- Ballard, S. (2010). Developing the vision: Enhancing your professional practice. *Knowledge Quest*, 38(3), 76-77.
- Dorman, J. P. (2003). Cross-national Validation of the What is Happening In This Class? (WIHIC) questionnaire using confirmatory term analysis. *Learning Environment Research*, 6, 231-245.
- Fraser, B., & O'Brien, P. (1985). Student and teacher perceptions of the environment of elementary-school classrooms. *Elementary School Journal*, 85, 567-580.
- Lewin, K. (1936). *Principles of topological psychology*. New York: McGraw.
- McDaniel, D.C. & Fraser, B.J. (2014). Effectiveness of integrating technology across the curriculum: Classroom learning environments among middle-school students. *Proceedings from the annual meeting of the American Educational Research Association (AERA), Philadelphia, PA, April, 2014*. Retrieved from http://www.academia.edu/9335598/Effectiveness_of_Integrating_Technology_across_the_Curriculum_Classroom_Learning_Environments_among_Middle-school_Students
- Moos, R. H. (1974). *Classroom environment scale manual*. Palo Alto, CA: Consulting Psychologists Press.
- Murray, H. A. (1938). *Explorations in personality*. New York: Oxford University Press.
- Schultz-Jones, B. (2011). Assessing school library learning environments. In L. Marquardt & D. Oberg (Eds.), *Global perspectives on school libraries: Projects and practices* (pp. 71-82). Berlin: De Gruyter Saur.
- Schultz-Jones, B., & Ledbetter, C. (2009). School libraries as learning environments: Examining elementary school students' perceptions. *Proceedings from the 14th International Forum on Research in School Librarianship at the 38th International Association of School Librarianship Annual Conference, Abano Terme, Italy, 1 – 4 September, 2009*.
- Schultz-Jones, B. A., & Ledbetter, C. (2010). Assessing school libraries as learning environments: Examining students' perceptions in third, fourth and fifth grades. *Proceedings from the 39th Annual International School Library Conference incorporating the 14th International Forum on Research in School Librarianship, Brisbane, Australia*.
- Schultz-Jones, B. A., & Ledbetter, C. (2013). Evaluating students' perceptions of library and science inquiry: Validation of two new learning environment questionnaires. *Learning Environments Research*, 16(3), 329-348.
- Tobin, K. G., & Fraser, B. J. (1998). Qualitative and quantitative landscapes of classroom learning environments. In B. J. Fraser and K. G. Tobin (Eds.), *The international handbook of science education* (pp. 623-640). Dordrecht, The Netherlands: Kluwer Academic Publishers.
- Todd, R.J. (2015). Evidence-based practice and school libraries. *Knowledge Quest*, 43(3), 8-13.
- Walberg, H. J., & Anderson, G. J. (1968). Classroom climate and individual learning. *Journal of Educational Psychology*, 59, 414-419.

“Ever Tried. Ever Failed...” – A Health Literacy Case Study and Evidence Review

Anne Madden

Library & Information Services, St. Vincent's University Hospital, Dublin, Ireland

Abstract: In 2016, the Librarians in St. Vincent's Healthcare Group (SVHG), Dublin, formed a partnership called HEAL (Health Education and Libraries) first teaming up with the Dublin City Public Librarians, and later bringing on board some interested researchers from the Health Systems Department of University College Dublin (UCD), with whom SVHG is affiliated.

Our first step was to establish whether we had a remit from the public to introduce a health education/health literacy initiative. HEAL ran a survey through the Dublin public libraries network for two weeks in May 2017 and the response was overwhelming – almost 1400 replies with more than half of respondents eager to participate in Focus Groups or follow-on events. Meanwhile, our UCD partners were successful in their bid for substantial EU Funding for a project in which HEAL was a participant. The future looked very promising.

Nonetheless, by the end of 2018, HEAL had ground to a halt.

In this presentation, the two major project “fails” are set out. Next, we turn to the literature to explore the evidence and identify how failure might have been avoided and to look for an evidence-informed direction for HEAL. Finally, we discuss what steps have been taken, based on this in-depth exploration of the literature.

Keywords: health education, health literacy, evidence-based practice, partnership, health librarians, public librarians, Ireland

The Evolution of LIS Higher Education in Romania

Dr. Octavia-Luciana Madge¹ and Dr. Simona Maria Antonescu²

¹Associate Professor, Department of Communication Sciences, Faculty of Letters, University of Bucharest, Romania

²Associate Professor, Department of Communication Sciences, Faculty of Letters, University of Bucharest, Romania

Abstract: After almost one century of evolution, the library and information science (LIS) higher education in Romania is approaching its maturity period even if it is still searching for an adequate correlation with the job development on the market of information transfer. The paper presents the history of LIS education in Romania from its interwar beginnings, passing through the communist period and finally its re-establishment after 1990 in a modern form. It describes the current programmes it provides at all level of study, undergraduate, master, postgraduate and doctorate, analyzing the curricula of each programme and underlying the difficulties encountered, the inconsistencies but also the necessity of adequacy to the labour market of the 21st century.

Keywords: library and information science, higher education, LIS curriculum, job market, Romania

Experiences Using National Statistics While Doing Research in 22 Libraries in Five Countries

Petra Düren¹, Markku A. Laitinen², Ane Landoy³, Angela Repanovici⁴

¹Hamburg University of Applied Sciences, Germany

²The National Library of Finland, Finland

³University of Bergen Library, Norway

⁴Transilvania University of Brasov, Romania

Abstract: Nowadays there is a growing need for libraries to use reliable and accessible data to show how good they perform and are in comparison to other libraries, as there is a constant reduction and closing down of libraries all over the world.

One resource for data are national statistics. Doing research in five countries, comparing 22 public and academic libraries, the researchers had difficulties in finding key performance indicators in national statistics to use for this comparison.

For this another research project started which compares selected indicators of these five national statistics, describing these indicators, comparing their quality and analyzing which indicators are missing in some countries.

There are other aspects analyzed as well: which questions national statistics cannot answer, but should and what it means that not all libraries are participating and delivering their data for their national statistic.

As the importance of comparing data of libraries is growing there will also be a short exploration of the IFLA Library Map of the World.

Keywords: academic library, national library statistic, public library, research

References

- Jilovsky, Cathie (2011): "Singing in harmony: statistical benchmarking for academic libraries", *Library Management*, Vol. 32 Issue: 1/2, pp.48-61.
- Laitinen, Markku and Jarmo Saarti (2012): "A model for a library-management toolbox: Data warehousing as a tool for filtering and analyzing statistical information from multiple sources", *Library Management*, Vol. 33 Issue: 4/5, pp.253-260.
- Landøy, Ane and Johanne Raade (2014): "Indicators for benchmarking in Norwegian academic libraries: Testing the usability of national collection data", *Qualitative and Quantitative Methods in Libraries (QQML)* 4:811-820.
- Liu, Yan Quan (2001): "The use of statistics in the managerial process by public library directors in China and the USA: a cross-country survey", *Library Management*, Vol. 22 Issue: 4/5, pp.187-194.
- Sumsion, John (1997): "University library statistics from LISU", *Library Management*, Vol. 18 Issue: 3, pp.163-168.

Experiential Learning: Visiting Libraries in Southern California

Dora Yéssica Caudillo Ruiz¹, María del Socorro Encinas Grijalva², Rubén Federico Martínez Rocha³, Juan Carlos Marcos Recio⁴

¹Dra., CETYS Universidad, Tijuana, Mexico

²Mtra., CETYS Universidad, Tijuana, Mexico

³Mtro., CETYS Universidad, Tijuana, Mexico

⁴Dr., Universidad Complutense de Madrid, Spain

Abstract: This research work consists off a qualitative analysis starting from a field practice that was born from the necessity to access information and knowledge as part of the Information Management curriculum subject. The study was conducted in CETYS University, located in Tijuana, Baja California, Mexico. It is a private institution that caters High School and High Education; this case presents the results on a sample taken from a population of more than a thousand students that have visited several libraries from Southern California in the past four years. In 2015, the institution implemented a program that promoted information culture within the students teachers and administrative personnel. Such program included diverse actions like installing technological equipment in the classrooms, update infrastructure, digital databases and expanding printed and multimedia library collections, as well as training current library staff and hiring specialized personnel, among other actions; the course Information Management was designed to promote informational skills in students; so the curricular content of this subject focuses on developing skills to access, evaluate and use information. To fulfill the purposes of the program, the teachers designed an exercise that consisted of a series of visits to different libraries, in order for the students to access other collections and expand their information sources. However, it was observed that the exercise involved other experiential factors that had a positive impact on the student's education; not only did they accessed other information sources, but their experience transcended the goal of the class activity. Geographic location is a determining factor for this case study; the proximity of the Tijuana and San Diego cities, has generated a binational link that has historically characterized this region of the Mexican border with the United States. The relationship between the both cities has been strengthened by librarian cooperation ties; the proximity has facilitated the transit and access between regions, successfully achieving the goal of this exercise which involves students visiting following libraries: San Diego State University (SDSU), University of California at San Diego (UCSD) and The Public Library of San Diego. The method used for data collection was through active observation; the teacher was in charge of taking evidence of the attitude and behavior of the students through images and video. Subsequently, a focus group was created with students from different careers in which they were interviewed and asked to describe their experience. The results indicate that experiential learning is an alternative that encourages meaningful learning;

"The student relates the new information with the information he already knows, readjusting and reconstructing both information of the process" (Ausubel, 1983). This type of knowledge remains in the students, because they have confirmed its veracity by themselves; in addition, it strengthens teamwork and the current and efficient way to use the available information resources. This activity is considered as a globalizing strategy and promotes working cooperatively, factors that are in tune with the educational principles of CETYS University.

Keywords: active learning, binational librarian cooperation, information culture, information management, library-academia linkage

Exploitation of Web Data Analytics for the Improvement of Academic Libraries Websites Visibility

Georgios A. Giannakopoulos

Research Lab of Information Management, Archival, Library Science & Information Systems, University of West Attica, Athens, Greece

Abstract: Websites visibility on the world wide web, related with the capability to be easily read and noticed by online users, or referred to by other websites. The greater is the visibility of a websites, the higher are the chances for clicks and visits by internet users in order to interact with them, browsing for covering informational needs, or buying products and services. In this paper we examine seven academic libraries websites and how users interact inside them, while exploiting web behavioral analytics metrics that impact to the websites' visibility level. Web analytics related with the collection, measurement and analysis of web user behavioral data in order to understand and optimize user experience. While taking into consideration four web analytics metrics (Pageviews per Visitor, Time Spent on Website, Bounce Rate and Website Global Rank) we proceed into a web data mining process for 120 sequential days to these specific web analytics metrics for each of the seven examined academic libraries websites. The Statistical analysis and representation of the extracted web behavioral data of these metrics takes place, while deploying Pearson ρ Coefficient of Correlation and Scatter Plots to depict the line and best fits. Through this, we understand how and in what way the Pageviews per Visitor, the Time Spent on Website and the Bounce rate impact positively or negatively to the metric of Website Global Rank as an indicator for websites overall visibility on the web. Moreover, we introduce the combination of Pearson ρ Coefficient of Correlation with the Fuzzy Cognitive Mapping approach as a practical and manageable system for visualizing the impact that each one metric has to the another while setting weighted indicators of -1 and 1 . The results work as a practical toolbox for information organizations in order to make more comprehensible for them, what content entails higher users' engagement in terms of better Pageviews, Time Spend on the website, lower Bounce Rate, and optimized website global ranking. Lastly, this research also tries to cover the research gap as regards the inability of information organizations to exploit the web analytics for improving their visibility in the web due to staff difficulties of defining the WA metrics, understanding the intercorrelations between them and exploit all these web behavioral data into actionable insights.

Keywords: academic libraries websites, websites visibility, web analytics, behavioral websites analytics, Website Global Rank, time spent on websites, websites pageviews, bounce rate

Exploring the Possibilities with Shared Spreadsheets in Gathering and Analyzing Information on the Usage of Study Rooms in a University Library

Mikael Reberg

The University Library, Mid Sweden University, Sweden

Abstract: In autumn 2018, a team within the Mid Sweden University Library decided to advance the usage of different methods inspired by the perspectives within the field of “UX” to study the use of the learning spaces in the library. A special project concerned the students’ use of group study rooms. Here the library employed a method where student mentors working for the library gathered basic statistical data through observations. The student mentors measured the usage of the study rooms, seats used, technology used in the rooms, sound levels etcetera at several time points each day. The information was continuously registered in a shared Google sheet that also worked as the basic tool for the analysis. The results of the study gave important guidance for the development of the study rooms and the learning environment in general. More importantly, the use of Google and the shared process of collecting and analyzing information was seen as a rewarding learning experience by the student mentors and the involved library staff.

Keywords: quantitative method, usage, spreadsheet, open collaboration, library, user experience, UX, learning environment, study room

Exploring Service Philosophy Statements Using Qualitative Content Analysis

Paul Moffett¹, William H. Weare, Jr.²

¹IUPUI University Library, USA

²Texas A&M University Libraries, USA

Abstract: This paper will describe a study in which we examined service philosophy statements at a diverse group of North American academic libraries. We used qualitative content analysis to examine their form and content to identify common themes, trends, and ideas.

Public services librarians spend much of their time wrestling with nebulous topics such as service quality, customer satisfaction, and user experience. Improvements in these areas necessitate strengthening the quality of the service and the culture in which it’s delivered. One approach to establish standards for consistent service delivery is for libraries to implement service philosophy statements. A service philosophy statement also communicates directly with users what they can—and should—expect from the library. Before we could develop and implement a service philosophy statement at our respective libraries, we wanted to understand the specific ways that service philosophy statements communicate service expectation to users. We will describe the series of steps we followed to conduct our research, such as creating the coding frame, segmentation of data, pilot coding, evaluating and modifying the coding frame, analyzing the data, and interpreting the findings. Finally, we will review the challenges we encountered during this process, as well as lessons we learned about qualitative content analysis.

Keywords: qualitative research, qualitative content analysis, service philosophy statements, customer service, service quality, public services, academic libraries

Eye-tracking Experiment Using Book Covers. Visual Data Analysis in Reference to Mind Space Mapping

Veslava Osinska¹, Grzegorz Osinski²

¹Nicolaus Copernicus University in Torun, Poland

²The College of Social and Media Culture, Poland

Abstract: The large amount and variety of visual information in library space requires the use of both non-standard research methods and experimental ones supporting by the modern IT technologies. The study of the eye movement provides us with the functioning of the visual perception system of a human while observing images such as: book illustrations, book covers, posters and other standard publications. The current eye-tracking experiment was performed using the series of collections of book covers. The both configurations of layout and images data set constitute the variables. Due to given results several rules of visual composition for library users are formulated. However, usually the process of analysis relies on determining the areas of the highest concentration of visual attention, which is only interpreted in the frame of information processing paradigm. The interaction occurring in the neural structures of the human brain is not always referred directly to the simple concept of image recognition. The paper also presents an outline of the theoretical concept attempting to combine the classical interpretation of visual perception with the mapping of neural activities of various structures of the human brain

Factors Affecting the Job Performance of Information Professionals

Farhana Saeed Hashmi¹, Kanwal Ameen², Saira Hanif Soroya³

¹Librarian University of Central Punjab Lahore, Pakistan

²Professor Department of Information Management, University of the Punjab Lahore, Pakistan

³Assistant Professor Department of Information Management, University of the Punjab Lahore, Pakistan

Abstract: Job performance is a multi-dimensional concept which involve several factors within the organization and in relation with employees which together results in better work performance. Employee performance is the building block of a flourishing organization. For the purpose of the present study job performance was measured by splitting the construct into three concepts i.e. task performance, contextual and adaptive performance and counterproductive work behaviors as devised by Koopman et al., (2011). Numerous factors may influence the work performance in one way or the other. It is very important for an improved job performance to identify those factors which may affect. For the purpose of the present study, age, job experience and library context were considered as independent variables to explore their impact on job performance. It was the quantitative study. Questionnaire was adopted for data collection. Population of the study comprised of those information professionals/librarians holding an M.Phil. degree (18 years education) and working in different kind of libraries. For this purpose, sample was taken from the four schools of the library and information management of the Punjab province. Purposive sampling technique with the condition of having at least one year of experience was imposed for

the professionals. A total number of 119 participants were selected to fill in the questionnaire. Out of which 87 responses received and response rate was 73.01%. The study revealed that an increase in the age effects job performance both positively and negatively in all the three aspects. Experience had also a significant impact on counterproductive work behaviors. Work place was also an important factor as it was revealed that contextual and adaptive performance of special library was better than academic and public library professionals. As for as counterproductive work behaviors were better in professionals of academic library professionals. The results of the study will contribute to the human resource management in improving policy implementation for recruiting information professionals/librarians. Results of the study will also help organizations in retaining the skilled professionals.

Keywords: job performance, task performance, contextual and adaptive performance, counterproductive work behaviors, factors effecting job performance, workplace, age, experience

Factors Affecting the Use of Mobile Learning in Higher Education: An Iranian Context

**Mohsen Haji Zeinolabedini¹, Hamed Abbasi Kassani², Fardin Salemian³,
Amin Raeisi⁴, Khaled Mirahmadi⁵**

¹Faculty of Information Science & Knowledge Dep. Education and Psychology School. Shahid Beheshti University Tehran, Iran

²Phd Student of Information Technology in Higher Education, Shahid Beheshti University, Tehran, Iran

³Graduated from Educational Technology, Allameh Tabataba'i University, Tehran, Iran

⁴Phd Student of English Language, Shahid Beheshti University, Tehran, Iran

⁵Phd Student of Educational Management, Shahid Beheshti University, Tehran, Iran

Abstract: The aim of the present study was to investigate the factors influencing the use of mobile learning in the higher education milieu. The research has used the descriptive survey methodology. The participants in this study were 265 professors at Shahid Beheshti University, Tehran, Iran. These participants were chosen randomly. The data were collected by a questionnaire consisting of 42 questions. The questionnaire was developed through a review of existing literature in this field. The reliability of the questionnaire was measured 0/ 89, using the Cronbach's alpha with SPSS software. To analyze the data and identify the factors, the exploratory factor analysis was run. The results revealed the factors affecting the use of mobile learning in higher education from the perspective of teachers, including technical and technological factors, motivational factors, personal factors, skills and knowledge factors. Based upon the findings and analyses of the present study, the influential factors in the utilization of the M-learning in higher education were identified and categorized. These 5 elicited factors includes technical and equipment shortcomings, cultural weakness, motivational and educational weakness in teachers, poor management and planning infrastructure and financial weakness and problems.

Keywords: higher education, mobile learning, contributing factors, Shahid Beheshti University, Iran

The Feasibility of a War Library for National Libraries: Case Study National Library and Archives of Iran

Elaheh Hassanzadeh Dizaji¹, Elham Esmaili Pounaki²

¹PhD candidate PhD Student in Knowledge & Information Science, Shahid Chamran University, Ahvaz, Iran/ Young Researchers Club, Tehran Medical Sciences Branch, Islamic Azad University, Expert of National Library and Archive of Iran, Iran

²Master in Knowledge & Information Science, Iran

Abstract: Historically, libraries have always been a key contributor to national development and it is appropriate that they take a leadership role in the current movement on national security. The role of the library in national security is not just to spread information in a particular area but to offer a holistic approach, around all aspects of the policies of the country. Information is therefore a crucial factor in national security. The ability to use information and its associated tools is a source of power for any nation which the library and librarians are best equipped to do. Information remains the only product which the library handles and this includes all media in which the information is shaped. The profession has long sought a culturally significant role in American society. During both World War I and World War II, librarians saw promise in providing critical war-related service, as well as in enthusiastically implementing wartime information restrictions and surveillance. At the outset of World War I in Europe, American librarians had only recently established a national professional organization. The American Library Association (ALA), founded in 1876, aimed its early efforts at providing standards for library management and professional activities, such as collection development. Wayne Wiegand (1989) described the American library of this period as "a politically marginal institution dependent on voluntary patronage by a relatively indifferent group". Understandably, library professionals were deeply concerned with the identification of a culturally significant purpose for librarianship. The war, then, presented a real opportunity for librarians: they could enhance the profession's stature by transforming their institutions into community war support centers. Also the ALA issued a declaration calling for every library to become "a war information center". At that time in America, the need was felt libraries become the war information center to actually and in this context, the library and librarians indeed have a role to play in national security. Therefore, libraries and librarians should be recognized as an important tool in national security. National security is possible through the use and collaboration of library, human and material resources. As regards the subject of war is so wide that it is possible to publish in almost all aspects of human knowledge and according the role of libraries in national security, it is imperative that the feasibility of a comprehensive and complete library be explored in this regard.

Keywords: war library, national libraries, National Library and Archives of Iran

References

- Salvatore D. Nerbo, 1954. "U.S. libraries," *Library Journal*, volume 79, number 1 (1 January), pp. 20–25.
- FBI asks libraries to report foreign readers, 1987. *Newsletter on Intellectual Freedom*, volume 36, number 6 (November), pp. 215, 241.
- June Pinnell-Stevens, 2003. "Libraries, privacy, and government information after September 11," *PNLA Quarterly*, volume 67, number 4, pp. 6–9.
- Wayne Wiegand, 1989. *An active instrument for propaganda: The American public library During World War I*. New York: Greenwood Press.
- Frederick J. Stielow, 1990. "Librarian warriors and rapprochement: Carl Milam, Archibald MacLeish, and World War II," *Libraries and Culture*, volume 25, number 4, pp. 513–533.
- Louise S. Robbins, 1996. "Champions of a cause: American librarians and the Library Bill of Rights in the 1950s," *Library Trends*, volume 45, number 1, pp. 28–50.
- C. James Schmidt, 1988. "ALA testimony on FBI 'library awareness' program," *Newsletter on Intellectual Freedom*, volume 37, number 5 (September), pp. 145, 174–175.

David K. Berninghausen, 1951. "Frontiers of Freedom," American Library Association Bulletin, volume 76, number 13, pp. 1071–1073.

American Library Association, 1996. Library Bill of Rights (January 23), at <http://www.ala.org/ala/oif/statementspols/statementsif/librarybillrights.htm>

American Library Association, 1995. Code of Ethics of the American Library Association (June 28), at <http://www.ala.org/ala/oif/statementspols/codeofethics/codeethics.htm>

American Library Association, 1986. Policy on Confidentiality of Library Records (July 2), at http://www.ala.org/alaorg/oif/pol_conf.html

Ossai-Ugbah, Ngozi Blessing. "The role of the library and librarians in promoting national security in Nigeria." Academic journal of interdisciplinary studies 2, no. 2 (2013): 99.

DOLLAH, W., & ALI, J. (2012). Determining factors influencing information security culture among ICT librarians. Journal of Theoretical and Applied Information Technology, 37(1).

First Steps in Building the Eurasian Latin Archive

Emmanuela Carbé¹, Nicola Giannelli²

¹University of Siena - QuestIT, Italy

²University of Siena, Italy

Abstract: Eurasian Latin Archive (ELA) is a project in progress at the University of Siena with the goal of building an open access digital library of Latin texts and documents from medieval and early modern times concerning East Asia, supporting a comparative language analysis of Latin and multilingual texts from different eras and areas.

The platform will be georeferenced and should allow exploration of documents based on language and contents, through: 1) linguistic data, to be analysed with computational criteria, in order to locate the relative thresholds for the incidence of author, period and location in a Latin document; 2) topic-based queries, to allow for research within semantic categories of involved texts, as well as examination of how the Far East was perceived in texts (both Latin and modern) of western travellers and “oriental” authors in western languages and in their own mother tongues.

To achieve this, we need to provide the digital library with a data mining toolset for textual and thematic analysis. The project implies many challenges, also considering multi-language elements and the characteristics of such “Eastern” Latin itself.

The theoretical and historical basis of the project has been first presented in 2017 by Professor Stella (Chief Advisor of the project) during the International Conferences Medialatinitas, in Vienna, and Silk Roads Again II: Eurasian Studies in the Digital Age, held in Hanyang University of Seoul. Starting in March 2018 ELA has been cofinanced by Regione Toscana, the IT company QuestIT and the publisher Pacini (dasmemo.unisi.it). Comparative research with documents in Far Eastern languages will be selected with the collaboration of scholars of Universities in China (Beijing), Korea (Seoul National) and Japan (Otsuma), thanks to agreements with the University of Siena. The paper will explain the workflow of the project in all its phases, from the first census of the documents up to the modular architecture of the platform. The first prototype consists in a digital library with freely searchable text (using the ElasticSearch search engine) encoded in XML format using the TEI P5 standard.

Keywords: digital libraries, quantitative methods, text analysis, TEI, NLP

Fix, Develop, Keep! Net Promoter Score as a Tool for Improving Customer Experience

Markku A. Laitinen

Planning Officer, National Library of Finland, Finland

Abstract: The Net Promoter Score (NPS) introduced by Fred Reichheld in 2003, is widely used in the business to measure the customers' loyalty to the enterprise by enquiring their willingness to recommend the product, the service or the enterprise as a whole to their friends or colleagues. In the library world, the NPS has been used in a large scale in the National Library of Finland since 2016 on the National Finna Service of Finnish libraries, archives and museums. The three user surveys of Finna in the years 2016, 2018 and 2019 produced altogether 95,647 responses indicating a growing trend of user satisfaction as measured by the NPS. Following the idea of counting the NPS, dividing the responses to the survey in three groups: the Detractors (the most critical responses), the Passives (the neutral responses) and the Promoters (the most positive responses), the most critical points of development as well as the success factors were identified. On the basis of the surveys, measures basing on the most critical points of development were made after each survey. The NPS is included in the new standard ISO 21248 (Quality assessment for national libraries) that will be published in 2019.

Keywords: Net Promoter Score (NPS), ISO 21248, user satisfaction, Customer Experience Management (CEM)

From Teachers to Students: Digital Literacy Course for University Teachers

Katri Rintamäki

University of Vaasa, Tritonia Academic Library, Finland

Abstract: Literacies in their many forms are in essential skills for higher education students both in their academic studies, in their future working life, and as the citizens of highly digitalized information society in general. Information literacy education for students is an established task of academic libraries. Information literacy is taught above all for undergraduate students, but also for graduate students and even, albeit more rarely, for post doc researchers and faculty. Probably the most significant weakness of effectiveness of information literacy education offered by libraries is that students perceive information literacy education as something separate from their "actual" studies and are not able to transfer learned information skills to their subject studies. This occurs in spite of the persistent efforts of liaison librarians to adapt their information literacy teaching to needs of each discipline. Instead, university teachers are in a key position to contribute to students' information skills by including information practices in their teaching and tutoring. Therefore, information literacy training for university teachers is a valuable means to develop even their students' information skills. This paper tells about practices utilized and experiences gained on piloting a digital literacy course for university teachers. Tritonia Academic Library in Vaasa, Finland was responsible for planning and teaching of the course *Digital literacy and information resources*, 5 ECTS. The course was a part of a 60 ECTS higher pedagogy study module that is developed and piloted in a research based and research supported development project HELLA – Higher Education Learning Lab led by Åbo

Akademi University in 2017–2019. The pilot course of *Digital literacy and information resources* was designed in academic year 2017–2018 and piloted in the winter 2019. In this paper, the teaching design process, learning objectives, teaching methods, and practical execution of the course are described and self-evaluated. Special attention is paid to the leaning assignments of the course in order to give some practical examples of good practices found and problems met. A special characteristic of the course design examined is its multilingualism: the course was executed in three languages, Finnish-, Swedish- and English-speaking participants taking part in the same trilingual online course. The main forum of the teaching and studying of the course was the learning environment Moodle. All course materials, assignments, instructions, and discussions were carried out in Moodle. In addition to online studies, the course included lectures and seminar sessions arranged as hybrid teaching. Thus, lectures and seminars could be attended in the classroom or online via a videoconferencing platform. Special attention was paid to online communication, because the whole course could be completed by distance learning. In the course, different digital tools, assignment types, and teaching methods were utilized in order to give participants examples of different opportunities in besides information retrieval, even in digital teaching. To have a digital literacy course included in a higher education pedagogy study module highlighted the relevance of information literacy in teaching and research. Further research with based on participants' feedback and even drawn-out feedback would be worth conducting.

Keywords: academic libraries, digital literacy, education, information literacy, university teachers, Finland

From the Diaries of Lifelong Learners: Do They Enjoy the Information Seeking Process?

April L. Colosimo and Giovanna Badia

McGill University Library, Montreal, Quebec, Canada

Abstract: Older adults have had a presence on the McGill University campus for three decades, participating in educational programming for the joy of it as members of the McGill Community for Lifelong Learning (MCLL). It is a place where the intellectually curious of retirement age play an active role in their learning, with an entirely peer-led study group model. The library has much to learn from and about this growing community. To begin, the MCLL Liaison Librarian and the Assessment Librarian have recruited members to participate in a diary study over the course of the 2019 winter term.

Diaries can provide insight into the information seeking behaviours of different student groups. They are a rich source of data, allowing study participants to describe their activities and experiences as they happen and to share their views without being influenced by investigators. Studies have shown that the practice of keeping a diary may also benefit participants' well-being as well as improve their learning and problem-solving skills.

MCLL members were asked to record diary entries each time that they looked for information related to their participation in a study group at McGill University. The authors are interested in their information seeking behaviours and the challenges that they face. Participants were also asked to rate their enjoyment of each experience, on a scale of 1 (lowest or least enjoyable) to 5 (highest or most enjoyable). This presentation

will focus on the ratings data and whether or not engaging in community learning “for the joy of it” extends to the information seeking process.

Learning about their behaviours, challenges, and enjoyment will inform the MCLL Liaison Librarian’s plans for targeted information services, and will be of interest to other librarians, given the gap in the literature related to library services for lifelong learners at higher education institutions. Furthermore, the effectiveness of using the rating system to capture enjoyment will be highlighted, along with strategies for handling the qualitative data gathered through the diary study.

Future of Subject Librarianship: Using Assessment Data to Guide the Continuing Education and Professional Development of Subject Liaison Librarians

Yelena Luckert and Gary W. White

University of Maryland Libraries, USA

Abstract:

Introduction

In 2014, the University of Maryland Libraries adopted a subject liaison librarian model to proactively deliver a full range of services to its faculty and students and move the Libraries into the future. Subject liaison librarians are Public Services librarians, responsible for developing and managing collections, reference, instruction and outreach in their assigned disciplines. They are required to be recognized specialists in their subject areas, and at the same time be professional librarians, skillful in library-related operations.

Objective

Challenged by severe changes in the academic environment, such as rapidly developing technology, proliferation of information, shifts in research and teaching priorities and methods, and consistently difficult budgets, subject liaison librarians must continually improve their skills and knowledge to keep current with the needs of the campus community, library profession, and their subject areas. To this end, the University of Maryland Libraries developed a professional development program for their subject liaison librarians, which combines internal and external learning and training opportunities, both individual and group based.

Methods

A liaison task force was formed to discuss the changing nature of liaison activities and to develop guidelines, training, outreach and assessment tools to ensure the success of the program. Based on this report, administration started to pay close attention to various training and professional development needs of the liaison librarians. By investing resources and time, developing policies and assessments, providing support and shifting attitudes among librarians, the administration developed a multifaceted training program for liaison librarians, consisting of both in-house and external opportunities for individuals and groups. In the process of implementation, described in this article, these policies, guidelines, and the program itself have been adjusted, added on and perfected in response to internal and external factors.

Results

In time of rapid and fundamental changes in academic and library landscapes, the successful liaison program is critical to meeting library and institutional goals. Many institutions of higher learning re-deploy their librarians to meet their strategic goals.

However, how do we ensure that our subject librarians have the right knowledge, communication, technical and outreach skills to perform their duties? Proper training of people in key positions ensures successful liaison program, specific to any given institution.

Outcomes

Many academic libraries are embracing liaison systems as a way to provide better services and engage deeper with the campus community. Many think that this is the future of librarianship, and perhaps even survival of libraries. However very few institutions have been able to develop and implement a full-scale training program for liaison librarians, which is necessary to ensure the success for the program. This paper will bring all elements of developing and implementing a liaison training program, providing members of the audience with valuable ideas and tools that they can use in their own settings.

Keywords: academic libraries, organizational development, assessment data, subject liaison librarians, training program, continuing education, professional development, liaison program, implementation

General Data Protection Regulation and Libraries

Aikaterini Yannoukakou¹ and Kyriaki Balta²

¹Chief Librarian of Customer and Digital Services, General State Archives - Historical Archives of Macedonia
PhD candidate, Department of Applied Informatics, University of Macedonia, Greece

²Librarian, Department of Music Sciences and Art, University of Macedonia, PhD candidate, Department of Applied Informatics, University of Macedonia, Greece

Abstract: Since May 2018, the 25th, the European Union's General Data Protection Regulation, hereby GDPR, has taken effect providing a robust legislative framework on the privacy and control of personal data for the citizens and residents of EU and European Economic Area. GDPR provides for a harmonized legislative and regulatory environment amongst the EU's and the EEA's members aiming for enhanced accountability, consistency and transparency on the collection and the use of personal data as well as the meaningful consent from the subjects on whom data is being used.

Under this scope, six (6) primary principles are introduced concerning:

- Access to information, namely the subjects' right to know which data are being collected and processed and for what reason as well as having access to them free of charge
- Data portability, namely the subjects' right that collected data must be available "in a structured, commonly-used and machine-readable form"
- Rectification, namely the subjects' right to correct inaccurate data or complete incomplete ones
- Right to be forgotten, namely the subjects' right to control over how information appears in Internet and potentially delete harmful or defamatory information
- Restriction, namely the subjects' right to prevent the processing of their data under certain circumstances, and
- Objection, namely the subjects' right to totally object on their data processing.

The implications for organizations, both of public and private sector, are immense as the GDPR includes strict regulations and preventing measures for data collection, processing, use and protection. The main aspects regard the increase of penalties in case of data infringement, the inclusion of privacy by design in all technical and organizational procedures to comply with the GDPR, the rules of engagement in case

of data breach, the obligation to inform on the information they hold and to supply an electronic copy of it if requested, the introduction of Data Protection Officer as a central institution of supervising the compliance of the organizations with the GDPR and act preventively against any actions of infringement.

Libraries are directly affected by the enforcement of GPDR as they collect, hold and use personal data of their patrons. The particularity of their operational scope imposes further implications on the implementation of GDPR. This paper aims to illustrate on the points and the novelties of GDPR that apply on libraries' operations and the way they should harmonize them with it. Even though, libraries have a tradition on protecting and restricting the access to their patrons' data, GDPR transforms structurally the entire mentality of personal record-keeping and the supervision of this process.

Health Librarians on the Move: A Multifaceted Initiative to Guide Researchers Out of the Maze

Giuse Ardità, Franco Toni

Istituto Superiore di Sanità – Knowledge Service - Library, Roma, Italy

Abstract:

Introduction: As experienced librarians affiliated with the Italian NIH, we serve the needs of several hundreds of researchers in various aspects related to the publication of their studies. In the last few years the Italian Institute of Health (Istituto Superiore di Sanità - ISS) has been included in the national research assessment exercise and Ministry of Health mandatory criteria, strictly related to bibliometric indicators, are to be fulfilled in order to apply to national grants and to access public fundings. When facing this new task, very often researchers are not aware of their own bibliometric or bibliographic needs. Moreover they grow frustrated when performing the activities related to the use of citational databases on which bibliometric indicators are calculated and feel all this as a waste of time. Submitting a paper always represents for researchers a crucial and stressing issue, also for the dangerous proliferation of predatory publishing.

Aim: As a matter of fact, bibliographic and bibliometric issues management belong to information professionals. In order to relieve affiliated researchers from these time-consuming activities, a working group particularly dedicated to bibliographic and bibliometric internal issues was organized by the ISS library.

Method: In 2018 the *Working Group* made an agreement to define all the activities to be developed in order to support affiliated researchers.

The starting point, was the sharing of individual professional knowledge among the group members who were engaged previously in different sectors.

A number of activities were scheduled for the benefit of our researchers:

- Bibliographic research, performed on several bibliographic databases to retrieve the best updated literature and also on citational platforms (*Web of Science* and *Scopus*) for the evaluation of publications, in order to retrieve all bibliometric indicators scores, also in benchmarking.
- Individual or collective training on demand
- Guidance in identifying right and trusted sources, hopefully open access, where to publish, taking into consideration also Ministry of Health mandatory criteria

- Creation and/or administration of author identifiers: *ResearcherID (WoS)*, *AuthorID (Scopus)* and *ORCID*
- Collective and individual training on different reference and management systems (RMS) such as *Endnote* and *Mendeley*
- Advertising of all services offered to get researchers involved at most, also by spreading leaflets and training material

Results: After some initial difficulties in spreading awareness of the different coordinated services offered, a positive response and growing interest of users was noted. Our personal availability to meet with researchers even in their laboratories when necessary, to solve bibliographic and bibliometric doubts during paper submissions, grants application and research reporting, was very positively received. Great satisfaction was especially detected when we succeeded in preventing authors from publishing on predatory journals.

Conclusion: The positive feedback received confirms the idea that becoming “librarians on the move” better fulfills practical and institutional needs of researchers. Moreover, this experience increases awareness that information professional skills should become really flexible in compliance with all changes required at the national and international level regarding scientific communication.

Keywords: information services, research assessment, benchmarking, publication strategies

How Effective Are Credit-bearing Information Literacy Courses? A Pre-test and Post-test Shows the Potential Grown from these Courses

Jade Geary

Instructional Design Librarian & Doctorate of Education Student, University of South Carolina, USA

Abstract: Understanding students’ information literacy skill level and what specific skills college students struggle with is an essential issue for academic librarians. By developing a deeper understanding of what skills students need to work on, better instruction can be provided for students. Like any skill, information literacy skills require frequent practice to ensure that students are able to effectively evaluate and apply information in an ever-changing information landscape. Two big questions remain; what skills are students still struggling with after credit-bearing information literacy instruction and is there any grown in student information literacy skills after credit-bearing information literacy instruction? As a follow-up from a previous study presented at QQML 2018, pre-test and post-data was collected from students who completed a credit-bearing information literacy course offered through the University of South Carolina. This pilot study was completed with a revamped information literacy pre and post-test and offers insights into the potential growth in student information literacy skills via an eight-week course. This paper looks at the pre-test and post-test scores of over 30 undergraduate students at a major research institution. Further, quantitative results of the pre-test and post-test will be shared during this session along with a discussion on what this data means for librarians and how we can help these students continue to grow their information literacy skills.

ICT Promoting the Educational Success of Students with Special Educational Needs (SEN)

América Silva, Ana Novo

Universidade Aberta, Portugal

Abstract: This paper is based on the research carried out for a master's degree thesis at Universidade Aberta, Portugal (Master in Information Management and School Libraries) and analyzes the relevance of the use of Information and Communication Technologies (ICT) in education, and the contribution that they can give to the development of social and cognitive competences (skills) of students with special educational needs (SEN), by promoting their inclusion. In this context, and according to the new paradigms of the 21st century school education, due to the demands of the global society, it is inevitable that we talk about technologies, new tools and resources in education, educational success and social inclusion. It is worth pointing out the contribution, support and collaboration that the School Library (SL), through its team and its own resources, can provide to students, taking into account the library's unique characteristics for the promotion of teaching and learning skills. In developing a collaborative work with all the teachers with the purpose of promoting inclusion, equity, the sharing of knowledge and the development of skills, the SL contributes to the educational success of SEN students and to the building of their life project.

We have established as the main research objective, to know the impact that ICT, the 'new' tools, resources and technological applications can have in promoting the educational success of students with SEN, reinforcing the learning of multiple curricular contents, fostering the inclusion in their own class and at school, investigating the contribution that school library and the teacher librarian, working in collaboration with the entire educational community, can give throughout the process. To achieve this main objective we had to analyze the pedagogical advantages that the use of ICT offers for the learning of students with SEN; to collect information on the contribution that technological tools can make to the development of the socio-cognitive capacities (skills) of students with SEN; to evaluate the training of teachers to work with different types of students with SEN; to investigate how the SL, in collaboration with all the education community, can help to promote the educational success of students with SEN; to promote the inclusion of students with SEN by developing collaborative work with the SL and the teacher librarian.

This work took the form of a qualitative case study research which focused on the universe of students with SEN attending the school under investigation. The participants were class tutors, ICT teachers and support service technicians and the methods of data collection were interviews, document analysis, non-participant direct observation, and diaries. The conclusions show that ICT, being tools that promote motivation, autonomy, self - esteem and interaction, offer significant advantages for cognitive, physical, social and emotional development of students with SEN. With this research, we have achieved a more precise, profound and sustainable knowledge about the daily life of the school under investigation in what the problems of students with SEN are concerned.

Keywords: Information Communication Technologies, inclusion, educational success, school library, students with SEN, Portugal

An Idea of Digital Library of Aviation History in Serbia

Ljiljana Macura

Librarian in National Library of Serbia, Research Reading Room and also PhD Student, Faculty of Philology, University of Belgrade, Serbia

Abstract: The subject of the paper is coherence of certain elements of economy and society through activities of an aeronautical museum. I would like to present the idea as an example of how non-productive sectors of the economy and non-economic sectors (i.e. traffic and tourism from tertiary sector and education, science, culture and the information sector, from quaternary sector) may provide contribution to the society by applying new technologies (future digital library of aviation history in Serbia). They can create innovative processes in the social environment, as well. Hence, experts from librarianship and information science and those from cultural tourism can be some new leaders in modern society.

Keywords: librarianship and information science, computer science, economy, traffic, air traffic, tourism, education, science, culture, modern society

Identification of the Nature of Scientific Specialties in Conference Proceedings

Vandy Pacetti-Donelson

United States Sports Academy, USA

Abstract: Identifying the nature of scientific specialties is a fundamental challenge for information science. Co-citation studies of peer-reviewed journal articles recorded in scientific databases, such as Web of Science, are the most common methodology used to identify science and make informed purchasing, tenure, and science policy decisions. With the expanding opportunities to publish outside peer-reviewed journals, especially for technology related fields, a method to study scientific specialties that coalesce outside the established publication record is overlooked. The goal of this study was to employ a custom database solution to conduct co-citation analyses of a non-traditional oeuvre in order to visually map its development as a knowledge domain and validate Instructional/Educational Technology as a scientific specialty and identify its nature as a field.

The theoretical framework for this study, Kuhn's seminal work, *The Structure of Scientific Revolutions*, emphasized the importance of community in the development of science in that paradigmatic development occurs with shared practices of inquiry. Scientific specialties form communities of practice most often with a convergence of the community in technology sectors through conference attendance. The Association for Educational Communications and Technology (AECT) is an international organization of instructional/educational technologists that has published its annual conference proceedings since 1979. These conference proceedings provide 35 years of published papers in this specialty that are not indexed in traditional journal databases and therefore provide an overlooked knowledge domain worthy of study for the identification of the nature of this scientific specialty.

Bibliometric indicators were extracted and collected into custom databases for co-citation analyses and multidimensional graphing. The data was divided into 5-year sets and Gephi 0.9.2 software was used to create multidimensional graphs to identify developmental and incremental change within the knowledge domain with the purpose of understanding the developmental pattern of the specialty. The graphs, taken as a

series, employ Betweenness Centrality from Network Theory to display co-citation connections. Seminal works, leading institutions, and researchers at the research front in each data set were identified and exhibit indicators for decision making. Further, Characteristic Scores and Scales identified in the data demonstrated lognormal distribution which has been identified as a persistent pattern across scientific fields validating conference proceedings, in this case, as a worthy oeuvre for the identification of a subject specialty (Viiu, 2018).

This study demonstrated that the nature of scientific specialties can be identified in knowledge domains outside of the traditional publication record and proposes a methodology to collate data and complete an analysis without traditional database usage.

Keywords: bibliometrics, network analysis, lognormal distribution, multidimensional scaling, non-traditional knowledge domains

References

Kuhn, T. S. (2012). The structure of scientific revolutions. University of Chicago press.

Viiu, G. A. (2018). The lognormal distribution explains the remarkable pattern documented by characteristic scores and scales in scientometrics. *Journal of Informetrics*, 12(2), 401-415.

The Impact of Cultural Differences on Information Needs of the Finnish and Japanese Hikikomori: A Comparative Study

Ari Haasio¹, Hajime Naka²

¹PhD Ari Haasio, Seinäjoki University of Applied Sciences, Finland

²M.A., University of Tokoha, Japan

Abstract: Word *hikikomori* is based on the Japanese word *hikikomorou* which can be translated as “to be confined inside” (Krysinska 2007; Ohashi 2008). Hikikomori is a person who tries to avoid all social contacts (Saito 1998; Furlong 2008). Although the hikikomori phenomenon is typically Japanese and it’s origins are in Japan (Krysinska 2007), similar cultural behavior has been identified in other countries (Haasio 2015; Husu & Välimäki 2017).

Our main research questions are:

1. What kind of information needs do Finnish and Japanese hikikomori express in the online discussion forums intended for hikikomori?
2. How do information needs of Finnish and Japanese hikikomori differ from each other? Where are the possible differences based on, and which variables may explain those differences?

Data used in this study is based on posts in Japanese and Finnish online discussion groups for hikikomori. The empirical data from Finland consist of 446 discussion threads containing 6910 messages posted to the Hikikomero discussion forum (<http://www.ylilauta.org/hikky>). Hikikomero is a forum intended to socially withdrawn people. We also collected the empirical data from Japan consisting of 200 discussion threads containing 6000 messages posted to the “Hikkyin2ch”, a popular text-based discussion forum in Japan for socially withdrawn people whose place is only home and has no friend (<https://matsuri.2ch.net/hikky/>)(“hikikomori@ni-channelu keijiban” in Japanese).

1041 different information needs were recognized from Finnish discussion group Hikikomero and 1619 information needs from Japanese hikikomori discussion group Hikkyin2ch. The way of life is very similar when we compare hikikomoris in Finland and in Japan. They are isolating from their society, avoiding social contacts and

spending most of their time at home by surfing in the internet and playing games like they tell at the forums. However, our finding shows cultural differences impact can be noticed in several information needs. Especially information needs concerning family relationship, economic problems, sex/dating, marriage, and food-related problems are quite different from between hikikomori in Finland and Japan.

The results of our study show that the influence of the cultural environment is not sufficiently taken into account in the analysis of the factors affecting the information needs of different groups of people who have similar way of life (e.g. homeless, gang members etc.). The further studies should analyze the impact of the different cultural characteristics of different cultures on the acquisition of information.

References

- Furlong, A. 2008. The Japanese hikikomori phenomenon: acute social withdrawal among young people. *The Sociological Review*. Vol.56(2), 309-325.
- Haasio, A. 2015. Toiseus, tiedontarpeet ja tiedon jakaminen tietoverkon ”pienessä maailmassa”: Tutkimus sosiaalisesti vetäytyneiden henkilöiden informaatiokäyttäytymisestä. Diss. Tampere: Tampere University Press. Acta Universitatis Tamperensis 2082. Available <http://urn.fi/URN:ISBN:978-951-44-9878-7>. (summary in english). (Otherness, information needs and information sharing in the “small world” of the Internet: A study of socially withdrawn people’s information behavior).
- Husu, H. M., & Välimäki, V. 2017. Staying inside: social withdrawal of the young, Finnish ‘Hikikomori’. *Journal of Youth Studies*, 20(5), 605-621.
- Krysinska, D. 2007. Hikikomori (Social Withdrawal) in Japan: Discourses of Media and Scholars; Multicausal Explanations of the Phenomenon. Doctoral dissertation, University of Pittsburgh.
- Ohashi, N. 2008. Exploring the psychic roots of Hikikomori in Japan. Ann Arbor, MI: Pro Quest LLC.
- Saito, T. 2013. *Hikikomori: Adolescence without End* (English translation of Shakaiteki hikikomori: owaranai shishunki). Minnesota University Press.

The Impact of Library Services on Local Community: The Case Study of Areas Adjacent to US Military Facilities

Kazuyuki Sunaga

Kokugakuin University, Japan

Abstract: This research will investigate the impact of library services in the neighboring area of the US military facilities in Japan. These areas receive subsidies from Japanese government for the improvement of life environment. There are 78 facilities dedicated for US military in Japan, the total area is 26,4405 square kilometers. In this research, we will cover Okinawa prefecture, which has the largest US military facility in Japan. By applying the research method of ISO 16439, we verify the statistical indicators and clarify the influence of the library on the residential environment of the area.

Keywords: impact, subsidies, US military facilities, local community

Impact of Mobile Technology in Libraries Pakistan: An Empirical Study by Using Technology Acceptance Model

Shahzad Abbas, Fakhar Abbas Hashmi, Hafiz Abdul Rehman

COMSATS University Islamabad, Pakistan

Abstract: The purpose of the study is to investigate the need of mobile technology in libraries of Pakistan by using Technology acceptance mode. The acceptance of new technology in libraries by students of higher education institute is evaluated in this study. 245 Students were surveyed for collecting data through questionnaire from library of higher education institute. Statistical techniques such as descriptive statistics,

correlation, simple and multiple regressions were employed. This study employed technology acceptance model for evaluating the accepting behavior of mobile technology in the libraries. This study revealed that most of the student use mobile technology and for technology acceptance they require ease-of-use facilities. Perceived usefulness also have firm effect on the behavior of accepting the new technology in libraries. By basis of this study future research will be done to recognize the requirement of the students to launch this technology in higher education institution of Pakistan. This research is considered to be the initiative study toward the launching of mobile technology concept in the libraries of Pakistan which bring these libraries in new era of digitalization. The result obtains in this study provide reference for further research.

Keywords: mobile technology, university libraries, Technology Acceptance Model, emerging trends, HEC Pakistan

Impact of Social Networks among the Research Scholars in Madurai Kamaraj University – An Analytical Study

Dr. K.Chinnasamy

Department of Library and Information Science, Madurai Kamaraj University, India

Abstract: A social network allows individual to bond and generate a personal profile, then formally connect with other users of the systems as a social friend, abortively with other users. In this study also analyzes the impact of social network among the research scholars. The reason behind selecting the topic was now a day social network has created a huge impact our day to day life as well as education. In Madurai Kamaraj University have 77 Departments divided into 20 Schools, for example, our Department of Library and Information Science comes under the School of Information Technology. For in this study, research scholars are selected as primary data. The primary data were collected from a random sampling method among the scholars. Totally, 500 questionnaires were distributed, 486 questionnaires were received. Among 486 questionnaires only 473 questionnaires were used data analysis, reaming 13 uncompleted questionnaires were rejected. After the data analysis, female respondents are equally used social network compared with male respondents. Majority of respondents have used the social network for sharing the information to all. Most of the respondents are feel social network has consumed more time.

Keywords: social networks, analytical, impact of social network and findings

Implementation of Integrated Library Systems in Academic Libraries in Uganda: Experience of Makerere University Library (Maklib)

Nakayima Sarah Maka, Dr. Helen Byamugisha

Makerere University library, Kampala, Uganda

Abstract: This study, extensively documents the benefits, successes, the level of success, and challenges of Virtua-ILS implementation in Makerere University library, which may provide a basis for evaluating the system. The study also unearths MakLib's areas of weakness with regard to Virtua-ILS and recommendations to improve them have been proposed in order to enhance the successful implementation of the ILS. A qualitative research approach was employed whereby data was collected using semi-structured interviews and analysed using content analysis and descriptive statistics. The results show that the implementation of Virtua-ILS at MakLib is fairly successful and the major success is with successful installation of the systems as well as the fully functional cataloguing, serials, archives and OPAC modules mainly at the Main Library. The circulation, acquisitions and funds coding modules are partially functional. The study may be of value to researchers concerned with ILS implementation success in developing countries and to Ugandan libraries that are planning to automate with an ILS as well as those wishing to migrate to another ILS.

Keywords: adoption, library automation, integrated library systems, academic libraries

Implementing Web 2.0 in a Ghanaian academic library: The University for Development Studies' experience

Miriam Linda Akeriwe

University for Development Studies Library, Ghana.

Abstract: Libraries have undergone technological advancements ranging from library automation to the use of mobile based services. These developments provide challenges to library managers both in terms of providing technology based - services as well as having the necessary skills to support library users. So, as an MIT student, I realised the benefits of Web 2.0 for library service delivery but my library could not use them because we did not have the needed infrastructure. I therefore in 2012 decided to conduct my mini dissertation research on how mobile technologies could be used to implement Web 2.0 based services using mobile technologies to graduate students of the University for Development Studies (UDS) in Ghana. The findings showed that UDS did not have any of the technology based services, however, majority of the graduate students had some practical knowledge in the use of some of these Web 2.0 applications. They also expressed interest in accessing their library's resources through the Web 2.0 applications using their mobile devices. Some of the challenges hindering the use of Web 2.0 at the library was the non- automation of the library as such difficult to introduce some of these services; the cost of Internet access; slow Internet connectivity and insufficient funds to acquire needed equipment and unskilled staff. It was recommended that the library be automated as soon as possible and the ICT equipment needed be provided to enable the introduction of these services. It was also recommended that staff be trained to enable them effectively manage these services. This paper is a report showing some of the innovations implemented at the UDS library as a result from recommendations suggested by participants in the previous study. The specific projects undertaken that would be described in detail include; the establishment

of full automation of the Library's services using KOHA (OPAC and off-campus access to e-resources), an Institutional Repository, the creation of a Library website, the creation of a Facebook, Twitter and YouTube accounts. The report would also include recommendations on how the UDS library could improve upon these services and also to ensure their sustainability; and an evaluative study on the impact these new services have made on the UDS library.

Importance of Students' Awareness of the Need for Information Literacy to Avoid Plagiarism

Petruša Miholič

University of Primorska, Slovenia

Abstract:

Purpose: Information literacy is a term that expresses a set of skills and knowledge on the basis of which an individual is able to recognize when information is needed, how to find it, evaluate it, and use it effectively. In Slovenia, the concept of information literacy within the universities is slowly being implemented, as there are no guidelines or criteria for achieving this strategic goal, even though a National Strategy for the Development of Literacy was adopted in 2005. In 2006, the Slovenian Library Association prepared a document with the starting points for establishing information literacy at Slovenian universities. The study covers 5 criteria and 22 indicators, including that the student understands the notion of plagiarism as representing the works of other authors as their own.

Methodology: With a questionnaire on plagiarism among students, we examined what plagiarism is, what the causes of plagiarism are and how to prevent and limit it. A survey was used for the purpose and data were collected through a web tool 1KA (www.1ka.si). The questionnaire was sent to the students of two faculties of the University of Primorska (Faculty of Education and Faculty of Mathematics, Natural Sciences and Information Technologies). We compared the collected answers to determine whether there is a difference between students of natural and social sciences. The data collection took place from 22nd February to 20th March 2016. The results of this survey were analysed by SPSS software. The questionnaire was sent to 2,413 students. The response rate was 21, 3%.

Results: The results of the research showed that there are no statistically significant differences between students of natural and social sciences in terms of understanding what plagiarism is, its causes, and how to prevent and limit it.

Conclusion: The paper will present the needs which are found in the study and conclude that teachers at the university should pay close attention to this problem and show the importance of citation to students, promptly warn them about misrepresentation and inform them of the violation and penalty in cases of plagiarism.

Keywords: information literacy, plagiarism, awareness, students, Slovenia, University of Primorska

IN-PROVE: The Software Development for the Effective Digitization and Long-term Preservation of the Modern Library Collections

Tomas Foltyn

Collections' Management Division Director, National Library of Czech Republic

Abstract: At the beginning of 2000 new Czech funding mechanism called VISK 7 aimed to the development of the libraries was established by the Czech Government. Probably no one from the past politicians, nor librarians, had expected those days, that this funding program will be still open in 2019 and will be more and more important for many fields of librarianship, including the preservation and digitization of newspapers endangered by the degradation of the paper. The wide range of more than 15 years is great possibility to evaluate all the benefits and changes of the supported activities, practices and impacts of the VISK 7 program. It provides also great opportunity to create new tools (or optimize the running tools), which can make the cooperation of the libraries more effective and facilitate the managerial decision-making process. From the early beginning VISK 7 program was used for the protective formatting of the newspapers. During the first years, participated libraries were microfilming their paper collections, round 2005 so called hybrid technology (microfilms and digital copy together) was accepted as the only one possible way of reformatting and round 2010 almost all the libraries started to use just the digital copy. Within this decade more than 800 titles of newspapers were digitized, that means more than 6 000 000 pages. The tools, which has made the process of digitization so effective, is called the Digitization Registry. Its aim is to create national registry of digitized documents, which could help the librarians to avoid unwanted duplicities in the process of digitization and to enable sharing the digitization results across the Czech Republic. The system is fully running from 2010, but during last year, the new version with various improvements was launched.

During several last years, VISK 7 program is more and more open also for other activities, which support long-term preservation of the newspapers – including deacidification, conservation, production of the sleeves from acid-free cardboard etc. To get all the necessary information in real time in one place is challenging. Building up the integrated environment for the professional everyday decision making procedure is the right step for the future of VISK 7. The development of this environment, linking the databases of the heterogeneous alone standing software tools, is running now. The presentation aim is to provide brief information about the history of the VISK 7 funding mechanism, describe its achieved results and benefits, and primarily present the new tools, which are used to support all the activities directed to the effective digitization and long-term preservation of modern library collections. This development is realized especially via the IN-PROVE project funded by the Czech Ministry of Culture.

Inclusive Academic Library: From the Perspective of Students and Staffs with Disabilities in Malaysia

Siti Mawarni Salim¹, Mohd Faizal Hamzah², Ilina Syazwani³

¹Senior Librarian, University of Malaya, Malaysia

²Senior Librarian, University of Malaya, Malaysia

³Librarian, University of Malaya, Malaysia

Abstract:

Purpose – The purpose of this study is to comprehend the level of satisfaction towards inclusive library concept among students with a disability in the academic library. According to Malaysia Act 658, people with disabilities shall have the right to the access to information, communication, and technology on an equal basis with people without disabilities (Persons with Disabilities Act 2008, Act 685). Therefore, it is compulsory for an academic library to provide basic facilities and services in the library. The academic libraries spend a lot to make sure users with disability are able to use the library. However, the previous study shows that the initiatives are not fully utilized by the targeted users. This study had identifies several factors that contribute to that situation.

Methodology- A set of questionnaires were sent separately to the users with disability in several Academic Library in Klang Valley. A number of 206 users with disabilities were involved in this study. The researcher had to conduct a various approached to collect data from the respondents. Some respondents required the researcher to read for them, enlarge the instrument and answer it using magnifiers. The questionnaires were developed and improvised based on the guideline provided by the previous study. Before the questionnaires were distributed, the researchers had conducted pretest, and a pilot test to review the instrument.

Findings – The finding shows that some of the initiatives toward inclusive library do not well plan. There is no feedback from the users with a disability or experts' advisor during the initiative. Most of the initiatives are at the fundamental stage. The awareness of inclusive concepts in the academic library in Malaysia is still low. The finding of this study helps academic libraries to improve certain service and facilities in the library.

Keywords: inclusive library, academic library, users with disabilities, library services, library facilities

Increasing Employability of HSS Graduates through Intervention to Improve Their Information Skills

Pradeepa Wijetunge

Librarian, Main Library, University of Colombo, Sri Lanka

Abstract: Nearly 55% of the Sri Lankan undergraduate enrollments in 2014-2016, have been in the Humanities and Social Science (HSS) faculties and in University of Colombo this is about 68% - 69% (UGC 2017), and the problem of their employability is often discussed. Similarly, problems with their information skills have been identified. The objectives of this paper is to discuss some issues related to information skills of HSS undergraduates and to illustrate how their employability can be increased through collaborative intervening of library and faculty staff. A Questionnaire and Focus Group Meetings (FGMs) were used to gather data from 451 students following

convenient sampling method. This paper discusses the findings related to their information resources (IR) usage, evaluation practices of IR, people consulted for help, their raining in using the library/Internet, barriers they encounter in using information resources and the process followed to seek and use information for academic purposes". SPSS (Ver. 23) was used to analyse quantitative data, FGM outcomes were written-down and analysed manually. There were 451 questionnaire (Q) responses and 95 attended the FGMs. Of the questionnaire respondents, 77.4% were female, 74.7% were 21-23 years, 47.7% from Faculty of Arts, and 52.10% from first year. Majority of the FGM participants were female, 64.7% were from the Faculty of Arts, 77.9% were seniors. Findings of the Q. established that, 70% used recommended readings and 62.6% used Internet, but all FGM participants confirmed they first use Internet and majority of them select material from the first few screens instead of using more standard evaluation criteria, 69.1% often turn to batch mates for help, only 37.9% and 44.6% have received training to use library resources and Internet respectively. 80% expect such training from the library. Cramer's V tests proved that there is no association between the above aspects and their year of study, faculty or gender. The respondents faced barriers related to the collection (55.4%), 11.5% barriers related to facilities (11.5%), barriers related to training (18.6%) and barriers related to services (8.9%). FGMs established that their Information Seeking and using Process (ISP) consisted of analysing, searching, selecting, organizing, writing and reflecting on the outcome, closely corresponding with some reputed ISP models. Nevertheless, it was ascertained that the ISP of the respondents is more self- and peer-taught than academically guided, except in few cases where a formal training has been offered. They were asked to mark in a continuum (1 – 9) whether they feel highly stressed (1) or completely relaxed (9) when they are solving an academic problem using information. Majority reported uncertainty and high stress level caused by the inability to locate/select appropriate material, incorporating facts in to their own work, and doubt about the quality of their work. The FGMs also proved that the stress caused by the uncertainty is common to all irrespective of their academic year. There was no indication that the respondents' ISP mature from rudimentary to complex level, while progressing across academic years. This study proved that the HSS undergraduates lack information skills while there are other studies that established HSS graduates lack employability skills. Many international studies have established that there is a positive association between information skills and the soft skills considered as employability skills and that, those who develop information skills, become proficient in applying them in their work environments. This paper recommends that it is the responsibility of the librarians to develop a multiplicity of information-related soft skills of HSS undergraduates, in collaboration with the faculty, so that their employability is increased in future.

Acknowledgement: Research Grant (AP/3/2/2016/SG/20) provided by University of Colombo is greatly acknowledged.

Keywords: employability, humanities and social science, undergraduates, information skills, Sri Lanka

Information-seeking Behavior of Engineering and Basic Science Students: Implications for Library Services

Angela Repanovici¹, Gordana Latinovic-Rauski²

¹Transilvania University of Brasov, Romania

²Manager, Collections and Information Services, King Abdullah University of Science and Technology (KAUST), Kingdom of Saudi Arabia

Abstract: This study presents findings about science and engineering students and their information-seeking and research strategies. A sample of students in two research universities, one in Romania and another one in Saudi Arabia, reported using a repertoire of research techniques and information sources that gave us an insight how they gather information and engage with information in the digital age. Few recommendations are included for librarians and educators working together to help inform pedagogies for the 21st century and make students more effective and ethical researchers.

Keywords: information-seeking behavior, engineering students, science students, information literacy, information access

Information Literacies to Transform Society

Godwin Nwachukwu Arua

Chief librarian, Federal College of Education, Eha-Amufu, Enugu State, Nigeria

Abstract: Information literacy forms the basis of lifelong learning and also is the basis for evaluating contemporary sources of information. The importance of information literacy is globally appreciated because of its potential to transform lives and societies. The world is in technological revolution which influences everything we do: the way we work, communicate and spend our leisure time. Literacy embraces the comprehensive set of skills needed by individuals to learn, work, socially interact and cope with the needs of everyday life. In the knowledge society, the widespread impact of advanced information and communication technologies (ICTs) on the lives of individuals and societies arouses the need to revise the current perspectives on literacy and to identify and define new relevant literacies. In the era of digital revolution, there is need to develop new forms of media literacy, computer literacy, and multimedia literacy, in addition to reading, writing and traditional print literacies, also known as multi-literacies or multiple-literacies. New media and cultural forms demand novel skills and competencies and if education is to be relevant to the problems and challenges of contemporary life, it must expand the concept of literacy and develop new curricula and pedagogies. Educators need to foster a variety of new types of literacies to make education relevant to the demands of the digital era. As new technologies are influencing every aspect of our society and culture, we need to understand and utilize them to transform our society. Introducing new literacies to empower individuals and group require a reconstruction of the education system to make it more responsive to the challenges of a democratic society. The acquisition of new varied literacies helps individuals to contribute in a novel way to the scientific, cultural, economic, political and social innovations. This paper explores a strong emphasis on print literacy, combined with developing multimedia literacy, computer and information literacies to help reconstruct education and society. The challenges accomplishing this task are also explored.

Keywords: information literacy, information literacies, Information and Communication Technologies (ICTs), multiple-literacies and society

Information Literacy for Effective Utilisation of Information Resources in Academic Libraries in Nigeria

Emmanuel Uwazie Anyanwu¹, Ifeyinwa Blessing Okoye², Chinyere Lemoha³

¹B.LS, M.LS, PhD Chief Lecturer (Reader), Department of library and Information Science, Federal Polytechnic Nekede Owerri, Nigeria

²B.Sc, M.LS, PhD Senior Librarian, Federal University of Technology, Owerri, Nigeria

³HND, PGD LIS, MLS, The Library, Federal University of Technology, Owerri, Imo State, Imo State

Abstract: Information literacy plays a major role in helping students to obtain information for their academic pursuit and for lifelong learning. It helps people to recognise when information is needed and have the ability to evaluate and use information. It also help in critical thinking. (Association of College and Research library 2018, ALA 2018, CILIP 2018). The learning has to be thorough to enable users to reap the benefit of information literacy in and outside the school. The library Clientele should be able to use information unaided. (Osagie 2003, Audu 2006, Nwokocha and Ugocha 2014). It has become necessary to evaluate library users to find out if they really obtained information literacy skill (Ivanitskaza, O'Bozle and Casey 2006).

The objective of the study are (1) to find out if users have literacy skill to find information. (2) to identify their ability to evaluate information. (3) find out their ability to identify plagiarism. Survey research will be used and questionnaire will be given to students of four institutions are Imo State University, Abia State University, Federal Polytechnic Nekede Owerri. One hundred copies of the institutions. Therefore a total of 400 respondents will be used in this study.

References

- Association of College and Research Libraries Information Competency for Higher Education (2018). www.wesleyan.edu (retrieved 30/10/18)
- American Library Association (2018). Information literacy. http://en.m.wikipedia.org/wiki/Information_literacy (retrieved 30/10/18)
- Audu, C O (2006). User education programmes in Colleges of Education in Plateau and Nassarawa States. *Coal city libraries* 4: 57-59
- CILIP (2018). Information Literacy. www.cilip.org.uk (retrieved 30/10/18)
- Ivanitskaya, L, O'Boyle, I and Casey A M (2006). Health Information literacy and competencies of information age students: results from Interactive Online Research Readiness *Journal of Medical Internet Resources* 8 (2): 3-10 www.rubi.nlm.nih.gov (retrieved 30/10/18)
- Nwokocha, N, and Ugocha O (2014) Issues and factors in the teaching of use of the libraries programme in Nigerian Universities. *Contemporary issues in Library and Information Science Educators* (NALISE) held from April 28 – May 1 2014 at Abia State University Uturu edited by Udo Nwokocha and Michael Ochogwu. Umuahia: Zeh Communication, 2015.
- Osagie, J N (2003) User education in tertiary institutions in Nigeria. Lagos: *Journal of Library and Information Science* 1 (1): 32-33.

Informed Learning Design: A Tool for Integrating Information Literacy into Disciplinary Curricula

Clarence Maybee, Michael Flierl

Purdue University Libraries, USA

Abstract: Academic libraries provide undergraduates with basic information skills, but struggle to teach students to use information in specific learning contexts. To address this need, librarians at Purdue University conducted a pilot project applying a new design model for working with classroom instructors to create information literacy assignments in disciplinary courses.

In one-day workshops, six classroom instructors working on five different assignments were introduced to ‘informed learning design’ (Maybee, Bruce, Lupton, & Pang, 2018). The model is grounded in Bruce’s (2008) ‘informed learning’ framework, which suggests that learning involves both learning content—such as concepts, theories, and facts—and also using information, for example analyzing, and synthesizing. The assignments designed in the workshop spanned a range of subject areas, including communication, English literature, aviation technology, pharmacy, and management. Across the day, each instructor worked closely with a librarian to: 1) identify aspects related to using information and aspects related to course content, 2) create an assignment to enable students to become aware of these aspects, and 3) develop an assessment strategy to determine if students’ awareness changed. Examples include revising an assignment in the communication course in which students make short ‘how-to’ videos to be more explicit about how to use information to draw in the viewer and to lend credibility to the procedure being described. In the pharmacy course, the instructors created exercises to help students reflect on how they engage with patient information, and guidelines to more efficiently complete patient diagnostic examinations.

To date, four of the informed learning assignments developed in the workshop have been implemented. To gauge student perceptions of the new assignments, librarians conducted short semi-structured interviews with 21 of the students (4 to 6 in each course). This easily manageable qualitative approach provided useful information for considering the impact of the project. The initial findings suggest students were aware of the role that information played in the assignments to enable them to learn. For example, students completing the how-to videos described their struggle to determine what could be considered credible information when discussing a non-academic subject such as hair styling and set design. The pharmacy students talked about prioritizing and organizing the information on a patient’s chart as a key strategy for making their diagnosis more quickly.

While more research is warranted, the initial findings from the pilot project suggest the utility of the informed learning design model in providing librarians with a theoretically guided process for working with instructors to develop a pedagogic strategy for teaching their students to use information to succeed in the course. Future steps include applying and evaluating the design model on a larger scale in various institutional settings.

References

- Bruce, C. S. (2008). *Informed Learning*. Chicago, IL: American Library Association.
Maybee, C., Bruce, C. S., Lupton, M., & Pang, M. F. (2018). *Informed learning design: Teaching and learning through engagement with information*. *Higher Education Research & Development*, 1–15.

Information Literacy @ KU Leuven University Libraries

Kim De Roo¹, Inge Discart², Krizia Tuand², Veerle Tuerlinckx¹

¹KU Leuven Libraries, Psychology and Educational Sciences, Belgium

²KU Leuven Libraries, 2Bergen –Leercentrum Désiré Collen, Belgium

Abstract: The world is changing rapidly and so is the academic world. Lifelong learning is one of the key points of the KU Leuven University and entails that our students leave the university at the end of their education with the necessary knowledge of information literacy (IL) and research skills. Efficiently looking for, selecting, evaluating and using information in a correct way will not only benefit them during their time as a student, but will also prove their usefulness in their further careers.

Academic libraries play an important role in approaching those changes and in making our students digitally competent for information retrieval. The KU Leuven Libraries staff are considered experts in this field and possess the required expertise to offer this know-how to all KU Leuven faculties, on every campus. The constant aim is to organize targeted initiatives for our students and researchers and to better support our teachers in all programs.

However, integrating a qualitative service into a large institution is often a challenge. In this session, the main scope will be how KU Leuven Libraries provides educational support to both students and staff members of KU Leuven University. We will give an overview of the opportunities we saw for knowledge sharing, collaborations, new initiatives and the use of (educational) technology.

Information Management and Digital Transformation: Uses and Impacts of New Technologies

Ricardo Rodrigues Barbosa¹, Maria das Graças Murici²

¹Professor, Graduate Program in Knowledge Management and Organization, School of Information Science, Federal University of Minas Gerais, Brazil

²Ph.D. Candidate, Graduate Program in Knowledge Management and Organization, School of Information Science, Federal University of Minas Gerais, Brazil

Abstract: The article presents managers's perceptions about the transformations promoted by various information and communication technologies, such as mobile computing, internet of things, cognitive technologies, e-commerce, social networks cloud computing, artificial intelligence and big data. in their companies. The objectives of the research were to investigate the opinions and expectations of the participants relative to a) the impacts of information and communication technologies in their companies; b) the levels at which technologies will transform their economic sectors; c) the levels of preparedness of their companies to deal with the changes brought about by digital technologies and d) the barriers to adaptation to digital technologies. More than three quarters (78%) of the 73 study participants are associated with Brazilian private companies and 13.7% operate in international markets. As for the areas of activity of the companies, they are concentrated in the services sectors, such as banks, insurance or financial services, education or training, consultancy, transportation and information technology, healthcare, commerce and public services. That is, the companies operate in the first, second and third sectors of the economy and work in several segments. Collectively, these companies represent 69.86% of the study participants. According to the participants, the most positive impacts of ICTs are on cost reduction and customer relationships, while the expectations for transformations

are higher in mobile computing and instant communication. The results suggest that companies are well prepared to deal with digital transformations, although there is much doubt about the potential transformations promoted by blockchain, robotics, and analytics/ big data. As for the barriers to organizational adaptation to ICTs, factors related to human resources stand out. The study highlights challenges and opportunities in the context of digital transformations for Chief Information Officers (CIOs).

Keywords: information management, information technologies, digital transformation, organizational change, chief information officers

Information System Applications in Smart Cities, Smart Buildings and Smart Life

Renata Maria Abrantes Baracho

Associate Professor, Graduate Program in Knowledge Management and Organization, School of Information Science, Federal University of Minas Gerais. Brazil

Abstract: This paper presents a proposal for an information system for the interdependent ecosystem that included Smart Cities, Smart Buildings, and Smart Life with connections to Smart Business and Industry. We argue for the importance of Knowledge Organization System (KOS) for the integration of many specialized information systems and insights gained from machine learning, which in turn supports the integration and mutual reinforcement of activities in planning, building, and operating smart cities and smart buildings in the service of real human needs, improving the quality of life and the efficiency of life activities. Such a Knowledge Organization System would allow us to map in detail the complex interactions of the many processes, objects, and factors in the interdependent ecosystem. It would facilitate the application of artificial intelligence (AI). It would allow us to connect key human needs to available resources and to work towards a sustainable planet. The paper illustrates the interdependent ecosystem through several examples, discusses the contributions of KOS and models, presents first thoughts on how a comprehensive Knowledge Organization System might be structured, and culminates in the proposal of developing such a KOS on a collaborative platform.

Keywords: data science, machine learning

Innovation in Libraries: Virtual Reality and Training for Librarians at the UNAM (Universidad Nacional Autónoma de México)

María Guadalupe Venteño Jaramillo, Martha Ibáñez Marmolejo, Eduardo Trujillo Sánchez, Estefanía Cabrera Jaimes, Ma. del Carmen Ramos, Víctor Hugo Franco Serrano, Javier Rodrigo Díaz Espinosa, Verónica Páez and Isabel Ávila

Universidad Nacional Autónoma de México, (Dirección General de Bibliotecas, Dirección General de Personal y Dirección General de Tecnologías de Información y Comunicación), Mexico

Abstract. In this paper, we present the application “The seven virtues of the library service” using technological innovations in the field of virtual reality to implement a simulator that enables administrative librarians to face everyday scenarios with the aim of improving the library user experience. The virtues that librarians must show when attending to users are empathy, interest, warmth, equality, personalized attention,

understanding and assertiveness, these virtues are shown when navigating in the simulator.

Methodology: various collaborative work meetings were held, the topics to be addressed were identified, 3D physical spaces were modeled for the virtual library, profiles of users and librarians were developed. Subsequently, the scenarios and dialogues for the different situations were designed. Reagents were also designed to evaluate the learning processes. Finally interviews with personalities were made to offer feedback.

This project is integrated by three work teams, one for each dependency, by the General Directorate of Libraries involved: Mtra. Martha Ibáñez Marmolejo (Academic and Deputy Director of Planning and Development), Dra. María Guadalupe Venteño Jaramillo (Academic and Head of the Personnel Development Department), Pas. Verónica Páez González (Academic) and the Pas. Isabel Ávila Camacho (Academic); by the General Directorate of Personnel: Dr. Eduardo Trujillo Sánchez (Deputy Director of Training and Development), Lic. Estefanía Cabrera (Department of Training Planning); and by the Directorate of Information and Communication Technologies: Mat. María del Carmen Ramos Nava (Head of the Virtual Visuality and Reality Department - IXTLI Observatory), Eng. Javier Rodrigo Díaz Espinosa (Programmer), DCV. Víctor Hugo Franco Serrano (Designer), Architect Ricardo Cornejo Bravo (Graphic section, Art and Modeling), DCV. Katty Esmeralda Moreno Barranco (Designer), DCV. Javier Reyes Santiago (Designer), Samuel Guillermo Vanegas Sánchez (Animation), Nicté G. Sánchez Flores (Artistic concept and character design). In conclusion, the application is already finished. Currently, it is used in the university's annual training programs and is now available to other institutions, after agreement with the university.

Conclusions

The application is already finished. Currently, it is used in the university's annual training programs and is now available to other institutions, after agreement with the university.

Keywords: innovation in libraries, virtual reality in libraries, training in libraries with virtual reality, capabilities in librarians

References

- Albrecht, K. y Bradford, L.J. (1998). *La excelencia en el servicio*. Bogotá, Colombia: 3R Editores.
- Alger, M. (2015) VR Interface Design Manifesto. Recuperado de: <https://vimeo.com/116101132>
- Alger, M. (2016) VR Interface Design Pre-Visualisation Methods Recuperado de: <https://vimeo.com/141330081>
- Best Practices for Rift and Gear VR (s.f.) Recuperado de: <https://developer.oculus.com/documentation/unity/latest/concepts/unity-best-practices-intro/>
- Center for Mobile Learning. (s.f.) Recuperado de: <http://www.media.mit.edu/research/center-mobile-learning>
- Creth, S. D., (1995). A Changing Profession: Central Roles for Academic Librarians. *Advances in Librarianship*, 19, 85–98.
- Colunga, C. (1995). *La calidad en el servicio*. México: Panorama.
- Google Expeditions. Google for education. (s.f.) Recuperado de: <https://edu.google.com/expeditions>
- Hudelson, B. (2017) Designing for VR | A Beginners Guide. Recuperado de: <https://blog.prototypr.io/designing-for-vr-a-beginners-guide-d2fe37902146>

Institutional Repository and Academic Social Network: A Case Study at the University of Lisbon

Luiza Baptista Melo^{1,3} and Tatiana Sanches²

¹Universidade de Lisboa, Faculdade de Medicina Dentária, Portugal

²Universidade de Lisboa, Instituto de Educação, ApPsy, ISPA, Instituto Universitário, Portugal

³CIDEHUS - Centro Interdisciplinar de História, Culturas e Sociedades, Universidade de Évora, Portugal

Abstract: The popularity of academic networks in the universities, such as LinkedIn, Google Scholar, ResearchGate or Academia.edu, indicate that faculties and researchers want and need to share, promote and make public their studies and investigations. The repositories of university institutions, also with Open Access policies, serve the same aims.

The Open Science is a concept that emerged in a digital environment and it purposes to provide data in Open Access, such as results and conclusions of scientific activities developed in the universities and research centers. Institutional repositories of universities and academic social networks are initiatives that are part of these goals.

This communication reveals the practices of teachers and researchers from the Faculties of Dental Medicine, Psychology and Institute of Education on the issue of the visibility of scientific information in academic social networks and in institutional repositories.

The data are obtained by analysing the profiles of professors and researchers in a professional social network, ResearchGate, crossed with the documents in the Institutional Repository of the University of Lisbon (Repositório.UL), related to the studied schools.

The University of Lisbon has more than 50,000 students, and about 5,843 employees, being the largest academic community in Portugal. The Repositório.UL aims to collect, organize, disseminate and preserve the academic scientific production of the University of Lisbon, one of the largest in Europe. The Repositório.UL includes the collections of the Faculty of Dental Medicine, Faculty of Psychology and Institute of Education.

We used statistical methods and quantitative data to compare the behaviours of the teachers and the researchers concerning their preferences on scientific documents dissemination throughout the World Wide Web.

These findings are important to find and raise to recommendations for best practices.

Keywords: repositories, social networks, Open Access

Instructional Media Preference, Availability and Use in Instructional Delivery as Determinants of Middle level Learners Academic Achievement in Core Subjects in Akure Metropolis

Pius Olatunji Olajojo¹, A. S. Gbotoso², Moyosade Omolade Oguntuase³

¹Dept. of LARIS, Faculty of Education, University of Ibadan, Nigeria

²Osun State University, Nigeria

³Afe Babalola University, Ado Ekiti, Nigeria

Abstract: Media for instructions are not generally available in many Senior Secondary Schools in Akure. Where such media are available, some Senior Secondary School teachers lack the requisite skills and creativity to use them effectively in their teaching. Some teachers also lack innovation in finding suitable local substitutes to help their students understand their lessons. This leads to the teaching of abstract lessons, misunderstanding of concepts and skills, and ineffective learning that negatively affect

academic achievement and teachers' output in terms of what is taught and learned by means of instructional media. The study adopted a descriptive design. The population comprised the Mathematics and English Language teachers of all Secondary Schools in Akure metropolis and some students in selected schools that participated in the study. Total enumeration was used for teachers while multi-stage random sampling techniques was used to select ten schools that have existence of basic media facilities. Questionnaires, and observation schedules were used to collect data. 2323 copies of questionnaires were served on the respondents out of which 397 was collected for teachers and 1763 copies of questionnaires were received for students. Data was analyzed using descriptive statistics. The results indicated that teachers rarely used the most appropriate instructional media in teaching their subjects. Though, as seen in the study, the availability of these instructional media vary from one school to the other. The observation is that some types of instructional media such as textbooks, computer, chalkboard were common in most schools while electronic board, flannel board and film strips were almost non-existence in most of the sampled Senior Secondary Schools. The reason for this is not far-fetched; it can be ascertained that the implementation of the curriculum depends to a large extent on resource provision and the government has recommended that the three areas of child education which are cognitive, affective and psychomotor domains are relevant to his/her education. These resources are therefore provided to ensure the overall development of the students.

Keywords: media preference, media adoption, media usage, instructional delivery

The International Spread of the Brown-Proschan Model for Imperfect Repair

Christos H. Skiadas

ManLab, Technical University of Crete, Chania, Crete, Greece

Abstract. The Brown-Proschan Model for Imperfect repair has already covered a 35-year journey in the scientific literature. Further to considerable citations the model has received very strong credit for its clarity and flexibility allowing further development and application. It is stated as a standard model important for theoretical and applied studies. Included in the main books on reliability and maintenance has received a worldwide recognition. However, the trend was slow in the beginning and continued with an exponential like form until nowadays.

The model emerged from the need of the large companies or the military in USA to solve the repair problems of complicated machines or devices. They have invested in science to receive the best solutions in real-life problems. Accordingly, the Brown-Proschan model was adopted and applied from colleagues in Japan and China following the considerable growth of these countries in industrial applications. Similar works are also found in Europe where, we have focused on some doctoral dissertations and search for further development and publications and presentations in conferences and events. Another option of the theory of perfect or imperfect repair has to do with the human population and our ability to recover from injuries, illnesses, thus reducing the impact of morbidity to our organisms following a repairable process. To this point several scientists borrowed parts of the theory of reliability and maintenance to apply in human population problems. Clearly it was an improvement, especially in the studies of the development of diseases like cancer and modeling the treatment in hospitals. There is an open field in modeling the health state of the population and more important of the health expenditure and the distribution of this expenditure by age group. The Brown-

Proschan Model will continue to inspire people and be a valuable support for future studies.

Interviewing Documents for Research: Prospecting for Information and Making Connections

Dr. Angela P. Branyon

Assistant Professor, University of West Georgia, USA

Abstract: Using documents for research is a qualitative research method that allows data to be examined and interpreted in order to elicit meaning, gain understanding, and develop empirical knowledge (Corbin & Strauss, 2008; Rapley, 2007). By using this methodology, the researcher is seeking convergence and corroboration through the analysis of multiple documents, both primary and secondary (data sources). In order to analyze a document (written text), Scott (2006) proposes the document meets four criteria: authenticity, credibility, representativeness, and meaning. Authenticity is the confirmation of authorship, place, and date of the document thus proving it is genuine. Credibility is the evidence that proves the documents are typical of all the others of its kind and were not prepared for the benefit of the researcher or to prove a specific research agenda. This is particularly easy if one is using documents that have been archived such as newspapers, journal articles, and published interviews. Representativeness is asking whether this document is a good representative of all the documents of its same kind. Finally, meaning asks whether a document is clear and comprehensible. Scott (1990) continues to explain that two meanings can be derived from examining documents, the literal meaning and the interpretive meaning. By reading and interpreting these documents until saturation is reached, the researcher is attempting to provide a “confluence of evidence that breeds credibility” (Eisner, 1991, p. 110). Analyzing documents incorporates coding content into themes similar to how focus groups or interviews are analyzed and coded. Implications for this methodology in the field of Library and Information Science (LIS) will be discussed and how to utilize this methodology will be demonstrated.

References

- Corbin, J., & Strauss, A. (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (3rd ed.). Thousand Oaks, CA: Sage Publications, Ltd..
- Eisner, E. W. (1991). *The enlightened eye. Qualitative inquiry and the enhancement of educational practice*. New York, NY: Macmillan.
- Rapley, T. (2007). *The Sage qualitative research kit: Doing conversation, discourse, and document analysis*. Thousand Oaks, CA: Sage Publications, Ltd.
- Scott, J. (1990). *A matter of record: Documentary sources in social research*. Cambridge: Polity Press.
- Scott, J. P. (ed.). (2006). *Documentary research*. Thousand Oaks, CA: Sage Publications, Ltd.

Introducing the Open Test of Information Literacy (OTIL): A Flexible Test for Different Information Contexts

Dr. Marina Rachitskiy¹, Dr. Leslie van der Leer¹ & Helena Hollis²

¹Regent's School of Psychotherapy and Psychology, Regent's University London, UK

²Department of Information Studies, University College London, UK

Abstract: The Open Test of Information Literacy (OTIL) is a new information literacy (IL) test developed to be adaptable for various contexts and participant groups. The test is comprised of a core scale of general IL questions that can be answered by participants

from a general population, such as the users of a public library. In addition, we have developed a Higher Education (HE) subscale that can be used in any English speaking HE institution. Three versions of each scale have been created to facilitate longitudinal testing, so that changes in IL over time can be measured without participants repeatedly answering the same questions. Further subscales for other information contexts can be created and added to the OTIL, for example to test IL in various workplaces, in members of different professions, or in specific populations such as prisons. The OTIL has also been designed to be a short test, so as not be overly taxing on participants, making it suitable for use alongside other measures to compare IL with other factors. We developed the OTIL using the new CILIP definition of IL (CILIP, 2018), aligning the test design with an up-to-date conception of IL. To this end, we analysed the text of the CILIP definition and identified key themes, from which we derived question categories. We consulted a panel of library and information science experts, and gathered feedback about these categories and the test questions in order to establish the face validity of the test. The panel concluded that the OTIL adequately represents IL. We will present their detailed feedback, including issues raised and our responses, in this presentation. We will demonstrate the test, and invite delegates to create questions of their own, and consider the creation of add-on subscales for their own contexts. We will furthermore outline the next steps of validating and deploying the OTIL, welcoming input and collaboration.

Keywords: information literacy, test development, assessment, face validity

References

CILIP. (2018). CILIP definition of information literacy 2018. Retrieved from <https://infolit.org.uk/ILdefinitionCILIP2018.pdf>

Investigate the Relationship between Knowledge Management and Organizational Commitment among Staff of Khaje Nasir Toosi University of Technology

Maryam Langari Moghadam, Mosayyeb Samanian

Islamic Azad University, Bojnourd, Iran

Abstract: Today, knowledge is known as a key valuable competitive asset, which is the basis for sustainable growth and a key to sustainable competitive advantage in an organization. So knowledge and human capital management must be considered as a key factor in any activity. This study has been done aimed to investigate the relationship between knowledge management and organizational commitment among the employees of Khajeh Nasir University in Tehran. This study is applied in terms of goal and in terms of descriptive method in the correlation type. The target population included all employees of Khajeh Nasir University in Tehran, and according to Kerjciec and Morgan table, 100 individuals were selected randomly and of proportional stratified type. Research tools included Probst et al (2000)'s standard questionnaires of knowledge management, and endemic questionnaire of Allen and Meyer (1997), whose reliability was measured using Cronbach's alpha coefficient 0.942 for knowledge management questionnaire and 0.716 for commitment. The research data were analyzed by the software 19 SPSS, using Pearson's correlation coefficient in descriptive and inferential statistics using the Kolmogorov-Smirnov test. Comparing the 74% significance level obtained with a coefficient error of 0.50 can be concluded that there is no significant relationship between knowledge management and normative commitment, and there is no significant relationship between knowledge management

and continuous commitment and affective commitment, except knowledge and affective commitment sub-indexes.

Keywords: knowledge management, organizational commitment, Khajeh Nasir University in Tehran employees

Invitations to interview on the role of the library in the undergraduate academic life: survey to select participants from diverse origin through posters and digital social networks

Alma Beatriz Rivera-Aguilera¹, Salvador Carrillo ¹, Alfredo Cruz², María Concepción Herrera¹, Sergio Salazar-Robles², Gabriela Solano², Andrea Horcasitas¹

¹Universidad Iberoamericana Ciudad de México, México

²ITESO, Universidad Jesuita de Guadalajara, México

Abstract: this paper presents the selection of participants in a study related to the role of the library in University life at two Jesuit universities in Mexico. One of the main objectives of this research is to listen to the voices of students from different origins at the two institutions. Our research team proposed diversity markers that represent different characteristics of undergraduates in our communities based on our experience as professors, the knowledge of our community and the existence of institutional offices that support special groups of students. We used a list of markers of diversity as a base to design a survey that facilitated the selection of participants. Posters invited students to participate; these posters included a QR code to link to the survey. Social networks were used to upload the poster in digital format to a Facebook group with a large number of "friends" from the undergraduate community of one institution. More than 40 students answered the survey, 70% of them were from the University who used social networks. The responses of the survey gave us not only information to select the participants, but also preliminary results of the true diversity of our communities in contrast to our proposal of markers of diversity. These data also provide demographic information beyond what institutions commonly count.

Keywords: Research in libraries; Library in University life; Surveys; Diversity; User Studies.

Is it Time to Move Out of the Comfort Zone? About Results of the Library Visitors and Non-visitors Study

Mai Põldaas

Development Manager, Tartu Public Library, Estonia

Abstract: In spring 2018 the survey of Estonian museum and library visitors and non-visitors was carried out (Möller, Runnel & Põldaas, 2018). The aim of the study was to find out reasons for visitation and non-visitation of two Estonian creative industry's cultural heritage subareas: museums and libraries. During the research, the task was also to identify services that visitors and/or potential visitors would like to use. At that, there had to be determined those services that museums and libraries do not offer yet, and to identify new possible target groups who would use these services once the selection expands. Study results help to find new possibilities how to make libraries' and museums' services more easily available and attractive for potential visitors and

new target groups, so that using services of these two institutions, there will also be an increase for socio-economic benefit. Research included interviewing Estonian inhabitants via phone: survey respondents' distribution is in accordance with Estonian population structure among 15-year-olds and older by geography, gender, age, education and language. The sample is 2000 respondents which includes visitors and non-visitors of libraries and museums. At the conference the findings of library visitors and non-visitors will be introduced and interpreted. The main results for libraries are:

- within the last 12 months, the share of libraries visitors among the entire population aged 15 and over, is 50%. Among library visitors, there are statistically significantly more women, people who speak Estonian, students, highly educated people and households with 1-2 children. Among libraries non-visitors, there are more than average men, Russian-speaking inhabitants, people aged 45 and over, people with secondary education, households with no children and retired people.
- the main reason for visiting a library is the pleasure of reading (44%) and the publications' selection that responds to the reader's needs (31%). A quarter of visitors pointed out different reasons related to studies, hobbies or work. Two most mentioned reasons for non-visiting library were lack of time (21%) and buying books or other publications (16%).
- Estonian libraries' strongest side according to respondents is a suitable and easily accessible location (70%), 62% of respondents evaluate the selection of books and other publications wide and sufficient, 61% thinks that the service is good, on high level. Current communication activity is, however, weakness of Estonian libraries: only 35% of respondents are pleased with it and a half of all respondents (49%) unanswered the question.
- the potential of visiting a library is lower than visiting a museum: 22% of Estonians plan to increase their number of visits to the library; 32% of residents don't plan to go to the library at all during the next year.

Keywords: user study, audiences and publics of cultural institutions, social impact of libraries, preparing library for tomorrow: 21st century skills

References

Möller, G, Runnel, P and Põltaas, M (2018) *Muuseumide ja raamatukogude külastajate ja mittekülastajate uuring [Museum and library visitors and non-visitors survey: report]*. Estonian Ministry of Culture. Retrieved January 28, 2019 from https://www.kul.ee/sites/kulminn/files/muuseumide_ja_raamatukogude_kulastajate_ja_mittekulastajate_uuringu_1_opparuanne_0.pdf

Journal Impact Measures in the Humanities: A Blessing or A Curse?

Rafael Repiso¹, Christian Gumpenberger², Martin Wieland² & Juan Gorraiz²

¹Universidad Internacional de La Rioja (UNIR), Spain

²University of Vienna, Austria

Abstract: Journal Impact Measures were originally introduced in order to assess the prestige and impact of journals. However, they have been continuously and incorrectly used for evaluation purposes at article level as well as for the assessment of scientists and universities. Moreover, in many bibliometric analyses the terms visibility and impact are hardly distinguishable from each other. They are even often used as synonyms, which leads to misunderstandings and false interpretations. Visibility and impact are rather two faces of the same coin that represents the "value" of a publication. The visibility of a document is actually determined by the reputation or the impact of the source where it was published. It reflects the editorial barrier and unveils

the author's publication strategies. In our talk we will present a sound model for a visibility analysis and discuss its strengths, constraints as well as new developments. Clarivate Analytics has so far remained true to the philosophy of Eugene Garfield and is still reluctant to calculate journal impact factors (JIF) in the Arts & Humanities based on data from the Web of Science Core Collection. However, other providers of alternative journal impact measures, like Elsevier, Scimago and CWTS, have skipped this restriction. They publish their editions of CiteScore, Source Normalized Impact per Paper (SNIP) or Scimago Journal Rank (SJR) on a yearly basis, which also include the Arts & Humanities.

The availability of alternative journal impact measures seems to be a great advantage at first sight, because it could become crucial for evaluative practices in the humanities. However, we will demonstrate that there are more weaknesses than strengths regarding the application of journal impact measures in this area of knowledge. Our results reveal serious constraints and negative effects. First, the number of citations on which these indicators are based on is very small. Second, the differences between the calculated impact measure values are so small and arbitrary that they certainly prevent any sound differentiation or classification. We also exemplify that journals with a high interdisciplinary character benefit most from these calculations, whereas all journals more strongly related to a specific category or research field are relegated to the last positions in the corresponding journal rankings. This undesirable side effect is even aggravated by indicators based on prestige metrics, e.g. citations from disciplinary core journals have more weight than those accrued from journals of the field periphery. Journal impact measures have already been seriously criticized in the hard sciences. Their unappropriated use in the Arts & Humanities can even be more harmful. Therefore, thorough reflexion and discussion are certainly top priority for bibliometricians, but also for librarians in general, in order to prevent unwished developments and effects.

Learning from Caregivers' Narratives in a Literary Competition

Ivana Truccolo

Centro di Riferimento Oncologico di Aviano (CRO) IRCCS - Biblioteca Scientifica e Pazienti, Italy

Abstract:

Introduction

At CRO Aviano IRCCS - a cancer comprehensive center located in the North Eastern Italy, an institutional Patient Education & Empowerment Programme (PEEP) has been active since 2010 coordinated by the Scientific & Patients Library (Truccolo, 2015). It is based on 3 areas: a) information & communication b) continuing education c) research. The promotion of narrative competencies is part of this programme and related to a global approach of Evidence Based Narrative Medicine (EBNM).

The impact of the EBNM on the healthcare organizations is far away to be demonstrated but literature about this topic is growing. The interest of healthcare organizations in the caregivers experiences is not new (Mcilfattrick S, 2006), but their impact of the organizations is scarcely explored (Parry, 2018).

Methods

Given a specific tradition of "honouring" patients' stories, a topic based literary competition has been organized for five editions (from 2012 to 2017). 208 stories about cancer illness, written by patients, caregivers and health professionals were gathered.

A study protocol "Learning from narratives by patients, caregivers and health professionals of a literary competition " has been written by a multiprofessional research group of education expert, teachers and librarians and approved by our regional Ethical Committee (2017).

Aim

The aim of this study is to analyze the texts to detect useful elements to:

- improve the understanding of the cancer related aspects
- gather the different perceptions of the cancer disease/sickness and illness
- get the implications for practice in term of healthcare workers educational needs, caregivers roles and expectations and priorities.

First we chose to analyze the caregivers stories.

Results

Until now 3 types of analyses have been performed on the 41 narratives written by caregivers according to a qualitative method (Mischler, 1995 - Riessman, 2008)

(1) Thematic analysis focussed on the content to highlight themes, semantic relations between themes, semantic fields (values, sentiments, behaviours, relations, perceptions) and the main cultural values.

(2) structural analysis to detect the features of the plot (characters, point of view, timing, style and resolution). The "Reading Guide for reflective practice" (Charon, 2015) was very useful in this phase.

(3) performance analysis to study the setting of production of the narratives and their social, cultural and psychological impact, the reason to write about themselves and illness. A further specific analysis on the metaphors has been done and a "meta-analysis" on the 41 conceptual maps.

Results

The first results of the caregivers narratives 'analysis highlight:

- A sickness/illness representation as biographical rupture of the family system (helplessness, loneliness, loss and increased vulnerability);
- the sick body is a synonym for wounded identity, the family roles dramatically changed and the caregiver is a spectator/actor of this very painful process
- the caregiver is a resilience enhancer and he/she plays a key role in hospital and at home care and endoflife.
- an emerging need of psychological support of the caregiver
- Healthcare management and environmental comfort are important elements of care.

Conclusions:

The qualitative research analysis performed until now has made evident the effectiveness of the caregivers' narratives analysis and its impact on healthcare organizations. The multiprofessional approach to this work has been an added value. Using qualitative methods in action research can be part of the core competencies of librarianship.

Keywords: qualitative research, cancer, librarianship, informal caregivers, text analysis, narrative medicine

Learning Media Availability and Secondary School Teachers' Adoption in Curricula Delivery in Core Subjects in a Nigerian Metropolis

Pius Olatunji Olajo¹, Jabesh Ajigboye², Tolulope Oluyemisi Adepoju³

¹Ph.D, Senior Research Fellow, Department of Library, Archival and Information Studies, University of Ibadan, Nigeria

²Nigeria Police Secondary School, Ondo State, Nigeria

³Readers Services Librarian, The Polytechnic, Ibadan, Nigeria

Abstract: Learning media for instructions are mostly not available in several Senior Secondary Schools (SSSs) in Ibadan that are government owned. Where such media are available, it is often noticed that SSS teachers lack the requisite skills and creativity to use them effectively in their teaching adventure. Needless to talk of absence of Innovation and improvisation needed in finding suitable local substitutes to help their students understand their lessons. This leads to the teaching of abstract lessons, misunderstanding of ideas, concepts and skills. This often results to ineffective learning that negatively affect academic achievement and teachers output in terms of total change in behaviour as a result of encounter with needed instructional media. Descriptive design was considered very adequate for this study. The population comprised the Mathematics and English Language teachers of all secondary schools in Ibadan metropolis and some students in selected schools made up the population of the study. It was expedient to use total enumeration for teachers while multi-stage random sampling technique was employed to select ten schools where basic media facilities exist. Two sets of questionnaire and observation schedule were used to generate relevant data. A total of Two thousand three hundred and twenty three (2323) copies of questionnaire were administered on the respondents. A total of three hundred and ninety seven (397) copies were collected for teachers and one thousand seven hundred and sixty three (1763) completed questionnaires were received for students. Descriptive statistics was used to present results. It was obvious from the results that teachers rarely used the most appropriate learning media in teaching the core subjects. Though, as seen in the study, the availability of these learning media varies from one school to the other. Textbooks, computer and chalkboard were reported common in most schools. Learning resources such as electronic board, flannel board and film strips were almost non-existent in most of the sampled Senior Secondary Schools. As part of the suggestions that would guarantee coming out of the imbroglio, the paper recommends that recommended learning resources appropriate for teaching core subjects should be provided by relevant stakeholders. Teachers should be encouraged to use adequate resources for teaching. State of the art learning resources should be made available in all secondary schools. Wherever and whenever improvisation is necessary, the teachers should coordinate their students expectedly to make learning real and quite motivating.

Lessons Learned from a Library Based Photovoice Project

Vicky Duncan and Samuel Schultz

University of Saskatchewan, Canada

Abstract: The purpose of this presentation is to share the ‘tips and tricks’ that we learned from doing a photovoice project with international graduate students at the University of Saskatchewan, Canada. After completing the data gathering phase of the project, the authors wish to share the benefits of their experience with other researchers who are contemplating undertaking a photovoice research project. What worked well, and what we wish we did differently fall into three main categories: 1) general organization of the project; 2) recruitment and management of participants and 3) conducting the interviews and focus group.

Keywords: photovoice, international students, interviews, focus group, qualitative research

Lessons Learned from the Greek University Consortia and Synergies: The Impact on the Research and Science

Alexandra Trianti¹, Iro Tzormbatzaki², Ageliki Oikonomou³, Anthi Katsirikou³

¹Library & Information Center of the School of Pedagogical and Technological Education (ASPETE), Athens, Greece

²University of Macedonia Library & Information Center, Thessaloniki, Greece

³University of Piraeus Library, Athens, Greece

Abstract: Since 1999 Greek academic libraries established a consortium for developing innovative services and increasing the scientific content to their end users. Although the scheme obtained a legislative entity on 1999, the cooperation started on 1994-5, when the first European financial support to the Greek academic libraries offered. Three years earlier the academic libraries established a one-year forum, as mini-conference in order to discuss the issues and make decisions on the policies. That was the crucial point of the transformation from the isolation to the synergetic pattern. When the European funds were offered, the academic libraries were ready to take the challenge and found their consortium establishing various policies aiming to the exploit the economic resources to acquire multiple sources, to enhance the ROI and to enlarge the opportunities of researchers, academics and students.

Among their main activities was the arrangement of the policies about journals subscriptions (print and electronic) aiming to reduce costs and promote access to a greater number of electronic sources. Founding of the Hellenic Academic Libraries Link (HEAL-Link), libraries members collaborate and work together in order to meet the educational and research needs of every user of the participating institutions. Librarians, administrative and technical staff act jointly and through their combined efforts and their expertise managed to advance their negotiating power against the predatory journal pricing and to develop a variety of services that assist the research distribution in Greece.

This paper aims to describe the history, the accomplishments and the impact of this consortium on the Greek academia community. Also it refers to the efforts, the maximization of the results relatively to the economic and human resources, the infrastructure, the knowhow etc.

The distance we have gone through was too long but the results justify them.

Keywords: academic libraries, consortia, open access, synergies

Librarian as a Collaborator in Supporting Spatial Humanities Research Projects

Nicole Kong

Associate Professor & GIS Specialist, Purdue University Libraries, USA

Abstract: Spatial Humanities is a new interdisciplinary field that results in the increasing interests among humanities scholars to apply the concept of space in their research. It focuses on the geographic location and its surrounding factors, and usually depends on the adoption of a set of technologies in digital humanities and geographic information systems (GIS). This “spatial turn” has generated many new insights in study of history, cultures, and regions. However, obstacles exist that prevent humanities scholars to fully adopt the research method, including the difficulty in data collection, mapping, technology support, and developing a “spatial” mind. Different with other information, spatial information are usually saved in relatively complicated format, which are difficult to manipulate and requires additional learning curves. This provides challenges for humanities researchers to acquire, use, create, publish, and preserve the spatial information in their “spatial turn” projects. Librarians can collaborate in these cases to integrate the spatial information into the research.

In this presentation, I will use two case studies to demonstrate librarian’s role in supporting scholarly research for spatial humanities. One example is to map Victorian women’s habitation and violence encounters in 19th century, and another is to map breaking culture using VHS tapes. Both of these projects initiated by humanities scholars without any GIS background but a strong interest to explore the potential of using space and location to answer their research questions. They have found Libraries could be a place not only to provide data collection information, but also to assist during the project development process. Through the collaboration experiences, the librarian’s role (or competencies) has been generalized in terms of supporting similar spatial humanities projects. In general, librarians can collaborate with humanities researchers in designing the data collection strategies, data processing and mapping, data analysis, and curation. In the data collections stage, humanities data are usually collected from literatures, news papers, videos, photos, interviews, etc., which couldn’t be generically mapped. A data collection and transformation method has to be developed by collaboration with librarians in order to make the project spatial. Then, these collected information need to be mapped. It not only involves today’s geocoding technology, but also include referencing to historical maps, using historical gazetteer, and other related information. To generate research results from the maps, different spatial visualization and analysis methods could be provided to the scholars in order to best present their findings. Finally, it is always the librarian and humanities scholars’ interest to curate and preserve the project-derived datasets for long-term reuse purpose. I will discuss the detailed methodology involved in each of these steps for both projects and the challenges we have overcome. Learned from these collaboration experiences, several basic skills need to be prepared for librarians to support these spatial humanities projects. These skills include data organization skills for relational datasets, basic GIS mapping and geocoding skills, visualization, and data curation.

Keywords: digital humanities, spatial humanities, data management, mapping, visualization

Librarian Image in Media and Real World

Tsai-yu Hsieh, Szu-chia Lo

Department of Library and Information Science, National Taiwan University, Taiwan

Abstract: The aims of this study are to reveal the librarian images in media and real world, and the factors influence image construction. The authors applied the image theory for image construction to enclose librarian images from viewpoints of appearance, personalities, professional competences and behavior. Survey approach was taken in this study, document analysis, questionnaire and interview were applied for data collection. Twenty-one movies that contain segments of librarians were chosen for this study as tokens to present media librarian images, and users from five public libraries were invited as informants to reveal librarian images in real world. The results show the similarity of librarian images in media and real world, low profile, middle age female with gentle and nice personalities. No particular professional competences required for the work, and most of time librarians are willing to help. The users draw the librarian image based on their personal experience, either by directly contact or projection from library services have been come into contact with.

Keywords: librarian image, media, real world

Libraries and Social Justice: From Impacts to Ethics of Care

Raphaëlle Bats¹, Marie D. Martel²

¹Centre Gabriel Naudé, Enssib, Université de Lyon / LCSP, Paris 7, Université Paris-Cité, France

²EBSI, Université de Montréal, Canada

Abstract: Pressed by budget cuts, destabilized by the place of Internet as a primary source of knowledge, torn between a need for advocacy toward elected officials and a militant desire for independence, libraries re-examine their ability to demonstrate the diverse and extended nature of their activities. Libraries first improved and refined their indicators for a statistical measure of the activity itself, its quality and user satisfaction. Over the past five years, libraries have conducted an important work in measuring their impacts through initiatives to measure the real cost and benefits of libraries. Some of these initiatives are carried by the associative movement, as the *Project Outcome* led by the Public Library Association, the framework *Creating a Culture of Evaluation* (2018) published by the Ontario Library Association in Canada; some are described in the book *Évaluer la bibliothèque par les mesures d'impacts* published in France (Touitou, 2016). Within these tools and standards, the question of the social impact still has a fragile status.

Yet, more than ever, libraries are encouraged to develop their social role (Martel, 2016, Pateman, 2017, De la Pena McCook, 2006, 2018). In France, the articulation between political role and social role finds a new dynamic through participatory projects (Bats, 2016); in Canada, the project *Working Together* proposes an approach to reduce systemic barriers using social inclusion tools, etc. Several notions are then summoned: social justice, human rights, social development, equity, social inclusion, and their corollaries: empowerment, resilient communities, recognition.

In this communication, through the construction and application of an analysis grid of impact measurement tools (*Project Outcome*, *Working Together*), we want to show that libraries are focused on two approaches: on the one hand, a statistical approach who meets some difficulties in defining relevant indicators that are easy to measure (AFNOR, 2016), and on the other hand, a qualitative approach, poorly mastered by

librarians and who can quickly look too anecdotal (IFLA, 2018). We will show that another approach could be possible, already but barely in germ of some evaluation tools, that of ethics. With ethics, we define which commits us to a certain vision of the world, of what is right and what is not. Ethics refers both intimate and active to the implementation of this social role, as a responsibility and commitment to society and not to the achievement of the objectives of the library.

The challenge would then be to build an evaluation model to measure the ethical dimension, focused on social justice and vulnerable populations in our activities. However, can there be a professional ethic, which is not “deontologique”, that is to say based on fixed rules, rights and duties, but on a certain relationship of self, as a professional, to the world around us? We hypothesize in this article that this professional ethic could be built around the notion of “care”. The care is a practice that is primarily concerned with situations of vulnerability and inequality and the resulting political function (2010, 181), and whose operationalization in the various spheres of society was formulated in the works of Joan Tronto and of Berenice Fischer (1990, 2009), as in those of Martha Nussbaum (2012). The care could be a theoretical device for analyzing, understanding and evaluating library responsibility and commitment to social development. It would then be a matter of evaluating and measuring the impact of our actions, not through a self-centered statistical ambition to save libraries, but the expression of attention to others, a responsibility and competence assumed collectively in the service of an inclusive democracy.

References

- AFNOR/CN46-8 Qualité - Statistiques et évaluation des résultats. (2016). Livre blanc « Qu’est-ce qui fait la valeur des bibliothèques ? » AFNOR. Consulté à l’adresse http://portailgroupe.afnor.fr/public_espacenormalisation/afnorn46-8/livre%20blanc%20fev2016.pdf
- IFLA. (2018). Libraries and the Sustainable Development Goals: a storytelling manual. IFLA. Consulté à l’adresse <https://www.ifla.org/files/assets/hq/topics/libraries-development/documents/sdg-storytelling-manual.pdf>
- Bats, R. (2016) « Les bibliothèques entre rôle social et politique », conférence inaugurale de la journée d’étude sur le rôle social et politique des bibliothèques, organisée par Médiaquitaine et l’ABF Aquitaine, Mai 2017
- Martel, D. M. (2015). « Trois générations de tiers lieux en Amérique du Nord » dans *Les bibliothèques troisième lieu*, sous la direction d’Amandine Jacquet, Collection Médiathème, Paris: ABF.
- McCook, de la Peña, K., Bossaller, J., Felton, T. (2018). Introduction to public librarianship (3th ed.). New York, NY: Neal-Schuman Publishers.
- McCook, K. de P., Phenix, K. J. (2006). Public Libraries and Human Rights. *Public Library Quarterly* 25 (1/2) 57–73. doi:10.1300/J118v25n0105.
- Nussbaum, M. (2012). *Capabilités : Comment créer les conditions d’un monde plus juste ?* Paris, Climats.
- Pateman, J., Williment, K. (2017). *Developing Community-Led Public Libraries*. London: Routledge.
- Public Library Association. (2017). *Project Outcome*. En ligne: <http://www.ala.org/pla/initiatives/performanceasurement>
- Touitou, Cécile. (2016). *Évaluer la bibliothèque par les mesures d’impacts*. Villeurbanne. ENSSIB, coll. « La Boîte à outils », 184 p.
- Tronto, Joan. (2009, 1993). *Un monde vulnérable. Pour une politique du care*. Paris: La Découverte.
- Tronto, J. C., & Fisher, B. (1990). « Toward a Feminist Theory of Caring » dans E. Abel, & M. Nelson (Eds.), *Circles of Care* (pp. 36-54). Albany, NY: SUNY Press.
- Working Together Project. (2008). *Community-Led Libraries Toolkit*. Vancouver. Working Together. En ligne : <http://www.librariesincommunities.ca/>
- Working Together. (2008). *Trousse d’outils pour des bibliothèques à l’écoute de la communauté. Engager. Collaborer. Participer*. En ligne: <http://www.librariesincommunities.ca/resources/Trousse-doutils-FRFinale.pdf>

Library and Information Sciences Research in India: A Bibliometrics Study of Indian Librarians

Lambodara Parabhoi

Professional Assistant, Indian Institute of Advanced Study, India

Abstract: The Bibliometrics Term was developed by A. Pritchard. He defines bibliometrics as “the application of mathematics and statistical methods to books and other media of communication” (Pritchard, 1969). Bibliometrics has changed out of all recognition since 1958; becoming established as a field, now it is widely used in library and information science schools (Thelwall, 2007). Many bibliometrics study has been carried out on different topics, areas, disciplines and so on. However, the current study will concentrate on bibliometrics analysis of those authors, who are currently working as Librarian and Deputy Librarian and Assistant Librarian in higher education system in India. It includes, Indian Institutes of Technology (IITs) (26), Indian Institutes of Management (IIMs) 20 in India, IISc. Bangalore & Indian Institute of Science Education and Research (IISERs) (08) and National Institutes of Technology (NITs) (31). These are prestigious institutions in India and offers higher education in technology and management.

Method of Data Collection

In this study the will collected from the Google Scholar. As very the coverage of Scopus and Web of Science database are very limited.

Step 1- The bibliographical data of librarians will collect from the library websites where they are currently working. The bibliographical data will include name, designation and email Ids

Step 2- Then Collect the Google Scholar IDs, CVs and list of publications from the Librarians.

Step 3- Then search the name librarians and Publications at Google Scholar and Export data using Publish or Perish software

Step 4- That analyze the data as per objectives such as:

- Top Contributors
- Highly cited papers
- Top Cited Authors
- Top G-Index Authors
- Top H-Index Authors
- Types of Contribution i.e. Articles, Conference papers, Book Chapters
- Average number of citations paper papers
- Cites per author
- Cites per year

I hope this bibliometrics study will bring new story and impact on library and information science profession in India and World. The study will give some new suggestion and ideas for Indian librarians. So that, they will focus on futures research. Furthermore, the paper will give a platform for discussion and receive some feedbacks from the librarians for future research, who will come from the different countries in upcoming QJML 2019

Keywords: bibliometric analysis, information and library science, research output, Indian Librarians

Library Data in the United States

Lisa M. Frehill

Senior Statistician, Institute of Museum and Library Services, USA

Abstract: Like libraries globally, U.S. public libraries have faced an array of challenges in the past decade. The increase in digital information has led to a realignment of collections and efforts at libraries towards digital content and away from solely print collections. The “digital revolution” has had important implications for the how libraries provide services as well as the staffing mix at libraries. In the United States for example, the following trends have been observed:

- Public libraries’ educational programming has increased substantially over the past twenty years and there has been a marked increase in the prevalence of electronic materials (IMLS 2018);
- The incidence of reference transactions at public libraries has declined (IMLS 2018);
- Academic libraries have increasingly shifted their research services away from the traditional walk-up reference desk towards more robust consultative services (Bishop and Bartlett 2013);
- While the incidence of library/media centers appears to be stable for U.S. primary schools (95.6%, Department of Education 2018), high schools were less likely in the 2015/16 academic year to report having a library/media center (80.4%, Department of Education 2018) as compared to 2013 (Tuck and Holmes 2015); and

This paper will present information about sources of library data in the United States. The prime focus will be on results from three of these sources: (1) the Public Libraries Survey (PLS), which gathers data annually from more than 9,200 U.S. public libraries (>95% annual response rate since its inception in 1988); (2) the State Library Administrative Agency (SLAA) Survey, which provides insights into the ways in which each of the 50 U.S. states and the District of Columbia support libraries across sectors (annual starting in 1994, changed to biennial in 2010); and (3) the Heritage Health Information Survey (HHIS) completed in 2014, which provides insights into the role played by libraries (among four other types of other cultural institutions) in conservation and preservation.

Additionally, information about two other U.S. government surveys about libraries in colleges and universities (Academic Libraries Survey (ALS)) and in primary and secondary schools (National Teachers and Principals Survey) and in proprietary surveys will be described, as appropriate. For example, the Academic Research Libraries survey contains data collected by a subset of university libraries and expands upon the data in the universe-based ALS. Additionally, various topical surveys are implemented among public libraries that involve convenience samples but which also build upon the basic elements that are collected from the universe of public libraries via the PLS.

Using these data sources, the paper will present trends in PLS data for several customary metrics will show how U.S. public libraries serve their patrons. The ways in which U.S. states facilitate connections of libraries and sharing of resources will be described using data from the SLAA survey. Finally, the ways in which states organize libraries—e.g. some state library agencies are within the state’s department of education, while others constitute their own departments, and still others are within

cultural agencies—provides an interesting way to explore the cross-sector connections of libraries.

Keywords: public libraries; U.S. libraries, data, metric trends, cultural conservation and preservation.

Library in the Media - Analysis of the Libraries' Representation in the Media

Stanka Jovičić¹ and Bojan Kundačina²

¹Assistant director, Belgrade City Library, Serbia

²Head of Lending Department, Belgrade City Library, Serbia

Abstract: The analysis includes articles related to the libraries, published between 2003 and 2018 within five daily print media (Politika, Danas, Blic, Vecernje novosti and Kurir), as well as two weekly newspapers (Vreme and NIN). These print media were selected for the analysis as the most widely read print media in Serbia and media that was continually being published in the specified period. Also, what was taken into consideration is the diversity of editorial policy, ownership structure, social diversity of the readers to whom the media addresses to. In this way, we've tried to include a wide range of media coverage on libraries, and therefore for this research more detailed media overview of articles on libraries.

The method of quantitative-qualitative analysis of media discourse was used as a research procedure. For analytical purpose, the following eight categories were constructed: 1) print media, 2) publication year, 3) purpose, 4) location, 5) authorship of the article, 6) context value, 7) journalist's context value towards the text and 8) number of comments and readers' reactions.

The research should be observed from two perspectives. The first part includes the analysis of the news that the libraries have created themselves, which are then taken over by the media, and how the libraries approach collaboration and understanding of the media. The belief is that libraries do not use this media space to its ultimate potential and that libraries should act more proactively and be more visible in the media space. Another aspect of research observation is from the perspective of the media itself, what are the prevailing topics related to the libraries to which the media voluntarily approaches to and the way the media deals with these topics.

Confrontation of these two aspects leads to the conclusion that libraries (and culture) need to work proactively and creatively, understand the importance of media visibility for their activities, but also for their existence in the society, availability of culture and education to the socially diverse community they serve. The conclusion is that libraries (and culture) in the market-media environment cannot solely rely on their own strengths without wider social and national affirmation and strategy.

Keywords: library, culture, media, visibility, strategy

Library Internet Use and Demographic Characteristics of Undergraduates in a Nigerian University: Uncovering the Areas of Need

Nkeiru A. Emezie, Scholastica A.J. Chukwu, Colette O. Onyebinama

The Library, Federal University of Technology Owerri, Nigeria

Abstract: This study investigated undergraduates of Federal University of Technology Owerri, Nigeria to ascertain whether their demographic profile was a characteristic of library internet usage. Data used for the study was a textual analysis of statistic register on library internet use from May 2017 – June 2018. The study population consisted of 2682 valid name entries during the period under study. Findings revealed that FUTO has greater number of male undergraduates and this is due to the academic structure of the institution. Discipline wise demographic characteristics showed that undergraduates from Agricultural Economics made most use of the library internet in School of Agriculture and Agricultural Technology (SAAT) while those in department of Electrical and Electronics Engineering (EEE) were the most users in School of Engineering and Engineering Technology (SEET). Also, undergraduates from Information Management Technology (IMT) and Project Management Technology (PMT) used the internet most in School of Management Technology (SMAT) while those in Biotechnology (BIO) were the most users in School of Biological Sciences (SOBS). Further findings revealed that undergraduates from Surveying and Geoinformatics (SVG) were the most library internet users in School of Environmental Technology (SOET) while Biomedical Technology undergraduates (BMT) made use of the internet more than their counterparts in the School of Health Technology (SOHT). Similarly, Computer Science (CSC) students used the internet most in School of Physical Sciences (SOPS). On the overall faculty level, School of Engineering and Engineering Technology (SEET) made most use of the library internet than other Schools. In terms of study level, it was revealed that final year (500 level) students used the library internet most. Having uncovered the disparity in library internet use, the study recommends among others that embedded librarians in FUTO should promote library operations and services through constant connection and communication with their various departments, continuous marketing and awareness creation of the library's internet facility.

Keywords: academic library, Internet, demographic characteristics, FUTO, undergraduates, Nigerian University, schools

Library Support for Research Data Management: A Taxonomy of Services

Fernanda Gomes Almeida¹ and Beatriz Valadares Cendón¹

¹Ph.D. candidate, Graduate Program in Knowledge Management and Organization, School of Information Science, Federal University of Minas Gerais, Brazil

²Professor, Graduate Program in Knowledge Management and Organization, School of Information Science, Federal University of Minas Gerais, Brazil

Abstract. This exploratory paper surveys information science literature to propose a taxonomy of services to support research data management. It also intends to identify data management support services performed by the libraries. The identification of the articles reviewed was carried out through searches in databases, Google Scholar and

cited references of the works analyzed. The articles were read, coded and categorized with the aid of the NVivo software, and categories were created based on the literature review. Three categories of services were obtained in the 165 articles analyzed: Infrastructure, Support and Educational. The paper concludes that the taxonomy proposed, although preliminary, can serve as a guideline for institutions or professionals who wish to develop RDMSs or add services to those already developed in their institutions.

Keywords: research data, research data management, libraries, services

Library Space Through Users' Eyes: A Qualitative Research Conducted by the National and University Library, Ljubljana (Slovenia)

Melita Ambrožič¹, Anja Mlakar², Eva Potisek³, Marjetka Sluga⁴ and Damjana Vovk⁵

¹ Deputy Director for Ljubljana University Library System, National and University Library, Ljubljana, Slovenia

² Research Fellow at the University of Udine, Udine, Italy

³ Librarian, National and University Library, Ljubljana, Slovenia

⁴ Librarian, National and University Library, Ljubljana, Slovenia

⁵ Head of Lending and Document Supply Department, National and University Library, Ljubljana, Slovenia

Abstract:

Purpose: The paper presents a study of the use of library spaces in the National and University Library in Ljubljana (Slovenia), which was conducted in the autumn of 2018, before the beginning of planned improvements and renovation of the library premises. The main goal of the study was to obtain information on users' satisfaction with the existing premises and to gain insight into their vision and as to what kind of library facilities would they prefer. The last major renovation of library spaces was completed in 2000. In the meantime, users' habits have changed, and the library has introduced a number of new services, as well. Though many changes of the library spaces have been made, that were supposed to be temporary, they have become permanent, although they are not optimal.

Design/methodology/approach: First, an exploratory phase of the research was carried out. We began collecting the research data by using the survey method. The survey questionnaire had six open-ended questions and five closed questions of the demographic type. Respondents were users, who were occupying predetermined library spaces at definite time. Students of the Library and Information Science and Book Studies of the Ljubljana Faculty of Arts, carried out a methodology of unobtrusive observation in seven library spaces. They were monitoring space use, movement patterns of users and their behaviour in the library spaces, and recorded data onto pre-prepared work sheet. Another group of students received different tasks requiring them to visit various library spaces and using different library services. During solving the tasks, they had to record the course of action and their feelings during the performance of defined tasks into pre-prepared forms. In addition, we used the focus group method to obtain an additional research data. The researchers conducted an oral group interview with representatives of users insufficiently represented in the survey data collection.

Findings: We have found out that only different research methods would give a systematic insight into users' needs and habits. Some methods are more appropriate for determining regular users' experience, others to obtain the library users first impression on library spaces. In most cases regular users revealed to be less in favour to changes.

They are also more satisfied with the library premises than newcomers are. Participants in the study generally suggested a number of concrete proposals for improvement of the library spaces that may be considered in the future renovation of the library.

Originality/value: The paper outlines the implementation of first qualitative research of a library spaces in Slovenia. In addition to the methods, appropriate for such research, the results of the findings also offer an insight into the advantages and disadvantages of a specific applied research method.

Keywords: library space, library users, academic libraries, national libraries, qualitative research, user studies, research methods, Slovenia

Lifelong Learning of the Profession of Librarian and Information Professional in Health Care in the Czech Republic

Helena Bouzková¹, Eva Lesenková¹, Richard Papík², Kateřina Žďárská¹

¹National Medical Library, Prague, Czech Republic

²Silesian University, Faculty of Philosophy and Science in Opava, Institute of the Czech Language and Library Science, Czech Republic

Abstract: The presentation focuses on librarians and information professionals in health care within the context of lifelong learning. In 2017, a survey was conducted by questionnaire in 115 medical information institutions in which 160 respondents participated. The survey was focused on determining librarians' lifelong learning needs. The survey confirmed the basic hypothesis that the education of medical librarians must be complemented with specialisation not only with regard to medical specialties, but also with regard to knowledge of information technologies, basic economics, pedagogy, legislation, communication, statistics, and other subjects.

Based on the interpretation of the survey results, a lifelong professional educational programme concept, entitled Competencies of a Medical Librarian for the Performance of Library and Information Activities, was laid out. Two areas of the educational programme were defined:

- a) Basic professional knowledge (theoretical) and skills (practical) related to library and information activities; and
- b) Specific professional knowledge (theoretical) and skills (practical) related to healthcare.

The objective of specialised education in the area of medical libraries is to give professionals the theoretical knowledge, practical skills and experience necessary to perform work in a specialised library. The contribution will present the results of the statistical survey, the further educational needs that were determined, and the content of both areas of the educational programme in more detail.

Keywords: medical librarian, information professional, lifelong learning, Czech Republic, medical libraries, professional training, competence

References

Bawden, David; Robinson, Lyn, (2012). *Introduction to Information Science*, London, Facet Publishing. ISBN 978-1-555700-861-0.

Robinson, Lyn, (2010). *Understanding Healthcare Information*, London, Facet Publishing. ISBN 978-1-85604-662-6.

Lawton, A. and Burns, J, (2015). Review of competencies needed for health librarians: a comparison of Irish and international practice. *Health Information and Libraries Journal*, 32, 2,84-94. ISSN 1471-1834.

Marchionini, Gary, (1998). *Information Seeking in Electronic Environments*, Cambridge, Cambridge University Press. ISBN 0-521-58674-7.

Long-term Preservation of a Web Resource: PAD Web Archiving

Paul Gabriele Weston, Primo Baldini, Laura Pusterla

University of Pavia, Italy

Abstract: Cultural resources in the network are among the most exposed to data loss risk due to a multiplicity of factors: hacker attacks, malware, hijacking accounts and internal technical problems are just some of them. Moreover, internal reorganizations or, conversely, poor maintenance of the site, are likely to cause preservation problems in regard to the long-term availability of research data. PAD-Pavia Digital Archives, a project of the University of Pavia, has been developed in view of permanently preserving digital native archives belonging to relevant figures of the Italian cultural world. In particular, it has recently developed a system aiming at the preservation of websites and social media pages. At the request of the owners, PAD picks up a copy of their sites, having established how often this should be carried out, as well as terms and conditions of access for sake of consultation. Through web scraping software, the author's website is made available locally, to guarantee offline browsing. In some cases, it has occurred that the site was already part of the author's contribution, since it was no longer available online. On each web page, PAD stores, in addition to the page itself, links to external pages, with an image of the site itself, and the documents (text, images or audio-video) attached. Once the material is acquired, a disk image is generated, then saved to the permanent storage area of the PAD system. These data are treated like digital native archives, taking all the precautions to ensure disaster recovery. Another copy is placed in the PAD web server, so enabling remote consultation. The same procedures are repeated for all the saved versions. If, in addition to web files, PAD also manages the digital documents archive and this has already been catalogued, it is possible to use this as an indexing tools for cataloguing the web files. The cataloguing system is automatic, since the large amount of material available on the web would otherwise be excessively cumbersome and time consuming, should a person deal with it. The human factor can take over a subsequent phase of control. For this operation the texts of the pages and the attached documents are taken into consideration. Each of these is compared with those present in the archive and from this we obtain a similarity index. If the index rate is high, the system automatically assigns the web resource to one of the categories of the digital native catalogue. This allows the user, when consulting the archive, to have equally access to the web material. Should at first sight be seen as other more ambitious existing projects, because of its restricted scope, PAD Web Archiving promises to be more sustainable and effective in the long run.

Keywords: long-term preservation, web preservation, digital native archives, web archiving

Making Public Libraries Safe Places for All

Jana De Brauwere

Program Manager, Business, Science and Technology Department, San Francisco Public Library, USA

Abstract: Urbanization, homelessness and opioid crisis in larger cities in United States are challenges that directly impact libraries and how they provide services. San Francisco Public Library located in one of the celebrated cities in United States finds itself amid a widespread opioid crisis. It is now more important than ever to keep the library doors open to all citizens and provide services that match the community needs.

The libraries are only relevant if the community finds value in them and can use the many services they provide.

San Francisco Public Library has experienced increased number of attacks on library staff. This presentation will cover how the library supports its employees in times of crisis and what best practices were established by the organization to maintain the status of a premier urban library. The presentation will cover specific knowledge and skills that are required of library staff to provide services on continuous basis. Jana De Brauwere will describe the journey the library took to change the organizational culture and how it reframed the way we serve public as well as our library employees.

In order to analyze the system-wide security and develop best practices the San Francisco Public Library formed the Security and Communications Task Force in 2013. Jana De Brauwere, the Chair of the Committee, will share several key documents and procedures developed as a direct response to security issues the library staff has identified over a period of several years.

The Security and Communications Committee is a group of individuals from diverse ethnic and cultural backgrounds and representing various classifications in the organization: librarians, library managers, library technicians, Library Security, HR employees and Union representatives and many more.

The strategic planning included:

1. Revision of the Patron Code of Conduct
2. Establishment of Security and Communications Task Force
3. Cooperation with San Francisco Police Department
4. Hiring of a Security Unit Manager (full time position)
5. Development of Annotated Patron Code of Conduct
6. Revision of Suspension and Appeal form and Suspension Checklist
7. Implementation of Narcan Policy
8. Development of Level 1 Incident protocol and checklist for supervisors
9. Creation of Incident Report Writing Guidelines
10. Development of Incident Report Writing training

Making Sense of Customer Satisfaction Data: Communicating Effectively to Senior Management and Library Operations Staff through Visualization Dashboards

Brenda Gomez¹ and Dr. Adeline Lee²

¹Manager (Business Analytics, Knowledge & Risk Management), National Library Board Singapore

²Deputy Director (Business Analytics, Knowledge & Risk Management), National Library Board Singapore

Abstract: The National Library Board of Singapore (NLB) oversees a total of 26 public libraries, the National Library of Singapore as well as the National Archives of Singapore. In recent years, the NLB's research and analytics team has been embarking on data visualization efforts to make data and insights easily accessible to users and in the shortest span of time. One of these key initiatives is to share the results of its annual Customer Satisfaction Survey. It is from this annual survey that NLB derives its Customer Satisfaction Index (CSI), an indicator that serves as the key measure of its performance from the viewpoint of its customers. Given that NLB takes stock of its yearly performance in terms of content and services via the results of this survey, the business analytics department explored the utility of having a Customer Satisfaction Survey (CSS) dashboard that will a) facilitate senior management decision-making, and

b) equip staff with the necessary information on patron satisfaction. This is crucial as we endeavour to constantly understand our customers' needs and expectations better, so as to stay relevant and continue to align our offerings in a way that will best serve them.

Keywords: user satisfaction, customer satisfaction index, library services, data visualization, dashboards, Singapore, National Library Board

The Management and Long-term Preservation of Modern Book Collections - The Cooperative System in the Czech Republic

Mgr. Anna Cajthamlova¹, Mgr. Tomas Foltyn²

¹Head of the National archival collection, National Library of the Czech Republic, Czech Republic

²Collection's Management Division Director, National Library of the Czech Republic, Czech Republic

Abstract: The system of long-term preservation of modern book collections in the Czech Republic is based on four archival collections in three main libraries: National Library of the Czech Republic, Research Library in Olomouc and Moravian Library, which have to take care of the book cultural heritage for the future. But there was no precise evidence about the documents, which are contained in the preservation collections, because of various approaches to these collections. In the past there were no systematic information about physical conditions of them, no systematic conservation, no digitization as a protection. But it was needed. A few years ago the unique cooperative system of the management and long-term preservation of the modern book collections among the biggest Czech libraries has been launched.

Nowadays it is possible for every single public library to get funding from the Ministry of Culture resources for conservation processes and deacidification. Some highly specialized tools using by many libraries e. g. Digitization Registry, The Registry of Deacidification or the Application for the results of physical conditions surveys are developed. The National Library experts published also the necessary methodological guides – how to realize the physical conditions surveys, how to build and manage modern collections etc.

The presentation aim is to provide the general information about these activities, describe implemented results and share the reached best-practices. Now is also developed a global system for building archival collections, which will provide wide range of information about documents in these collections.

However, the most important is especially cooperation between libraries in the Czech Republic – not only between libraries with archival collections, as you will see during the presentation.

Mapping Research Trends in Institutions of Higher Education in India

Kruti Trivedi and Jagdish Arora

INFLIBNET Centre, India

Abstract: Research articles published in high-quality, peer-reviewed journals are considered as one of the most important parameters to measure quality of individual scientists, researchers, academic institutions, country and the scientific establishment in general. This study attempts to map research cumulative research trends in 526 institutions in India including 91 centrally-funded technical institutes, 41 central

universities and 394 state universities. A number of bibliometric techniques such as publication analyses, citation analyses, research collaboration with other countries, co-word clustering and correlation have been used for mapping publication trends amongst these institutions of higher education in India. Research collaboration is considered as an important parameter to measure emerging trends and topics that attracts international attention and reflects general tendencies towards internationalization. Identifying most productive and emerging topics from research domain is also crucial for intellectual and policy reasons. In this study, we have taken a practical approach for analyzing scientific collaborations and co-word clustering of research publications of 526 institutes of higher education in India. The article also visualizes network and structure of research publications produced by these institutes which effectively provide insights into growth, development, collaboration of research output in India. In addition, the article also examines and evaluates correlation between number of articles downloaded by these 536 institutes with number of research articles published by them. 308 institutes that are getting access to e-resources through eShodh Sindhu Consortium are selected to measure correlation between number of articles downloaded with number of research articles published by these institutes. A strong and positive co-relationship is found between number of article downloaded by these 308 institutes and number of research articles published by them. Finally, we have compared research output growth in India with other countries along with R&D expenditure.

Mapping the Inside of a Collection: ArcGIS as Content Analysis Tool

Benjamin Aldred

University of Illinois Chicago, USA

Abstract: This paper uses GIS technology to assess content within a collection of urban planning material. The paper first examines the possibilities and importance of geographic content analysis within library collections, highlighting the connection to user needs. The paper then details how to use library systems to annotate content for mapping purposes. From there, the paper presents a number of maps produced in ArcGIS that can be used for library decision making in collection development.

Keywords: collection development, GIS, maps, urban planning, subject librarianship, weeding, visualization

Mapping the Structure of the Scientific Domain of Ontology

Nooshin Hormozinezhad, Atousa Koochak, Fatima Fahimnia

Shahid Chamran University Of Ahvaz, Iran

Abstract: The current research is to investigate the thematic domain and sub-domains of ontology and the inter-relationships of these sub- domains and analyze the usage and efficiency of this method in mapping the structure of its own domain. This research is practical in type wherein the customary techniques of scientometrics method such as co-word and network analyses were used. Thus, there were extractions of the scientific articles on ontology released in WOS which included 17015 records from 2000 to 2016. After refining the keywords of these articles, words of the ontology domain and its sub-domains were identified; and the data was analyzed using obtained maps, clusters and categories and their interrelationships via VOSviewer software. For the key concepts,

324 words were selected and analyzed. The results of co-word analysis via VOSviewer software implies creation of six thematic clusters in this field. The main concentration point of the reviewed texts was on the subjects such as “ontology”, “semantic web”, “knowledge”, “ontology gene”, “OWL” and “web”. The concepts show good distributions on map. The final maps show that the concept “ontology” is close to “semantic web”, and reveals the fact that the effect of the two words upon each other is more elaborated in current texts; however, more distance between the word “ontology” and the concepts “information”, “classification”, “language”, and “systems” shows that in the current studies researchers have not put enough emphasis in the relationship between these concepts.

Keywords: co-word analysis, thematic map, network analysis, ontology, VOSviewer

Measuring Information Literacy Core Competency of Social Science Researchers in National Capital Region, India

Rajesh Singh¹ Shailendra Kumar²

¹Deputy Librarian, Central Library, University of Delhi, India

²Associate Professor, Department of Library and Information Science, University of Delhi, India

Abstract: This study aims to empirically measure the Information Literacy Core Competency (ILCC) levels of social science researchers on ACRL’s Standards. The core concepts identified from standard I to V are: ‘Information Need’, ‘Information Access’, ‘Information Evaluation’, ‘Information Use’ and ‘Information Use Ethics’. The study was conducted on a sample of 520 researchers enrolled for Ph.D. in select central universities in National Capital Region, India. These researchers hail from different parts of the country and provide a pan India representation. The questionnaire schedule was developed translating each identified concept into a set of ten questions and 2 marks were allotted to each correct answer. Various techniques of descriptive statistics including frequency distribution, percentage, bar graph and tools of inferential statistics like One-way ANOVA, F-ratio and Post-Hoc test using LSD were applied for data analysis. A Performance and Competency Scale was used to measure the ILCC levels. The study indicates that on Standard I, 77.7% of the respondents comprising 15.8% from Economics, 14% from Sociology, 13.7% from Political Science, 12.3% from History and 11% from both Geography and Law were having ILCC to determine the extent and articulate information need. The ILCC level of the respondents on Standard II was found low as only 53.8% of the respondents including 12.1% from Economics, 9.4% from Law, 9.0% from Political Science, 8.5% from History, 7.5% from Sociology and 7.3% from Geography were identified competent in ILCC to access needed information effectively and efficiently. On the competency scale maximum 13.8% of respondents from Economics, followed by 13.4% from Sociology, 11.5% from Political Science, 9.6% from Law and 9.2% from both History and Geography constituted 66.9% of the respondents competent in ILCC on Standard III to evaluate information and its sources critically for its authenticity and reliability. As many as 76.2% of the respondents (16.2% from Economics, 14.4% from Sociology, 12.3% from History, 12.1% from Political Science, 10.8% from Geography and 10.4% from Law) have shown ILCC on Standard IV to use information effectively to accomplish a specific purpose. On Standard V, maximum 16.5% of respondents from Economics, followed by 15% from Political Science, 13.1% from History, 12.7% from Sociology, 11.3% from Law, and 11.0% from Geography constituted 79.6% of the respondents competent in ILCC to use information ethically and legally.

Thus, on the competency scale, maximum 46.2% of the researchers for 'Information Access', followed by 33.1% for 'Information Evaluation', 23.8% in 'Information Use', 22.3% on 'Information Need' and 20.4% for 'Information Use Ethics' have shown incompetency in ILCC.

The study also aims to identify and establish the ILCC levels of researchers within and across different subjects. The findings are supposed to be of great help to all the stakeholders to plan, organize and participate in various information literacy activities and ultimately enhance the IL competency of researchers.

Keywords: ACRL Standards, information access, Information Evaluation, Information Literacy Core Competency, information need, information use, information use ethics

Measuring Information Literacy in Algerian Public Libraries: Competency and Skills of Library Professionals

Khedidja Oulem

Lecturer, Department of Library science, Tebessa University, Algeria

Abstract: The purpose of this conceptual paper is to measure information literacy in main public libraries in Algeria. In the past few years, Information literacy has become an interesting subject for libraries especially academic libraries, regarding to their role in providing information and developing higher education. More recently, in public libraries, it is a core activity. Indeed, information literacy has been happening in public library through many services such as: providing free access to information resources, encourage lifelong learning, reader and audience development, life skills.

In this respect, public libraries in Algeria work as new public workplaces aiming to provide free access to information resources to everyone. They help and encourage people to use information in their educational, scientific, social, cultural and economic development.

In fact, in this paper we try to asses to what extent Algerian public libraries are prepared in terms of information literacy and which are ready to engage community in this direction.

Keywords: public library, information literacy, services, standard, Algeria, measure

Methods of Computing Reader Numbers in a Digital Library

Mirosław Górny, Artur Wierzbicki

Poznań Foundation of Scientific Libraries. Poznań. Poland

Ul. Powstańców Wlkp. 16

Abstract. The paper concerns methods of estimating numbers of users of digital libraries, using as an example the Digital Library of Wielkopolska, Poland. Three methods are discussed and compared:

1. Computation based on a reader survey;
2. Computation based on the library's built-in counters;
3. Computation using tools such as Google Analytics.

MiCISAN, Institutional Repository. A Collaborative Project in the Context of Open Science

Norma Aida Manzanera Silva¹ and Hugo Alberto Guadarrama Sánchez²

¹Center for Research on North America (CISAN), National Autonomous University of Mexico (UNAM), Mexico

²PhD Student in Library and Information Science Program (IIBI), UNAM, Mexico

Abstract: In the global panorama of initiatives that promote open access and open-science policies that enable society to leverage information generated in research (embodied in different types of documents such as articles and books), Mexico developed in recent years (2016-2018) based on its normative frameworks (Law of Science and Technology, reform of 2014) a strategy in charge of the National Council on Science and Technology (CONACYT) to develop open access repositories through a call for funding some projects reviewed by experts.

For its part, the National Autonomous University of Mexico (UNAM), aware of the importance of making accessible the enormous scientific and academic production that generates it, promoted the program “All UNAM online” (2014) and the “UNAM Open Data Web Portal” (2016) for increasing the presence and the impact of the university in both, national and international fields, as well as to reinforce transparency and accountability in an open access context.

It is in this global and national context where emerge the creation of the Institutional Memory (2011) of the Center for Research on North America (CISAN) of the National Autonomous University of Mexico (UNAM). From the Publications Coordination, in the Circulation and Sales Area with a librarianship vision was complete the Historic Archive of printed publications and was built it correspondent data base in order to promote them. This data base was enriched through time and was used to incorporate the CISAN into the initiatives “All UNAM online” and the “UNAM Open Data Web Portal” opportunely.

The Institutional Memory was the basis for defining a proposal to develop MiCISAN, Institutional Repository, whose objective is to offer a broader visualization and universal access to the scientific knowledge on North America and its relations with other countries. The project was supported by the CISAN authorities and was part of the projects financed by CONACYT.

The purpose of this document is to share our experience that were followed to create MiCISAN, Institutional Repository, with four collections that, due to their scholastic, cultural and historic value represent an important institutional legacy. We detail here how dataset was uploaded in a digital platform with more than 5,000 records described in a standardized manner that guarantee interoperability, with a high degree of granularity, and directing us towards technological scalability.

Nowadays, MiCISAN is a centralized, and stable open-access digital platform. It requires no subscription, registration, or payment, and conforms to the international and national interoperability standards. It allows for the use and reuse of information and an automatic link-up with the national repository and others in Mexico and abroad. This platform hosts the CISAN’s institutional memory, currently made up of four collections of items previously published by the center: books, booklets, and the CISAN magazine *Voices of Mexico* and *Norteamérica, Academic Journal*. Retrieved from <http://ru.micisan.unam.mx/>

By 2022, MiCISAN is projected to be a sustainable digital platform and an essential mechanism of scientific innovation for anyone doing specialized research about North

America. In this context, it will include collections of multimedia resources produced by the CISAN.

Keywords: visualization, digital collections, open access, open science, repository, institutional memory, granularity, scalability, interoperability

Migrating from Integrated Library Systems to Library Services Platforms: An Exploratory Qualitative Study for the Implications on Academic Libraries' Workflows

Efstratios Grammenis¹ and Antonios Mourikis²

¹Software Engineer, IT teacher, Msc, 1st Vocational High School of Xanthi, Greece

²Librarian, MSc, Athens University of Economics and Business, Greece

Abstract: The present paper is based on a master thesis work that was carried out in the Linnaeus University (Sweden) and is an exploratory qualitative study in academic libraries regarding the transition from the integrated library systems to the next generation integrated library systems or library services platforms and the potential implications in their internal workflows. In our study we explored the phenomenon in the globe studying the international literature and by conducting two methods of the qualitative approach that of semi-structured interviews and observation we identified that not only there are important implications on libraries' workflows but also that new ones have been created.

The results of our study are presented in the paper along with a comparison between the Greek situation and the international one.

Keywords: library information systems, next generation integrated library systems, library services platforms, academic libraries, qualitative study, workflows, Greece

Motivation and Job Satisfaction of Library Paraprofessional Staff: A Systematic Review

Sumaira Hussain, Saira Hanif Soroya²

¹Librarian, University of Education, Lahore, Pakistan

²Assistant Professor, Department of Information Management, University of the Punjab, Lahore, Pakistan

Abstract:

Purpose: The paper aimed to systematically review the literature on motivation and job satisfaction of library paraprofessional staff. The research tried to find out the literature having empirical evidence of impact of motivation and job satisfaction on performance and services of library paraprofessional staff. The study also intended to identify the factors of motivation and job satisfaction of paraprofessional staff.

Research Objectives: The study had the following research objectives: (i) to identify the impact of motivation and job satisfaction on job performance and services of library paraprofessional staff, (ii) to discover from which country the most literature regarding motivation and job satisfaction of library paraprofessional staff got published, (iii) to identify the major factors enhancing motivation and job satisfaction of library paraprofessional staff.

Design/Methodology/Approach: The literature was searched through Google, Google Scholar, Web of Science, ProQuest, LISTA and Scopus using the library portals of central libraries of University of Education, Lahore and University of the Punjab, Lahore. Publication year and subject limit was applied. The studies published since

2000 to onward and published in English language included in the search. Theses and dissertations published locally and internationally were also included. Studies determining the impact of motivation and job satisfaction on job performance and services of library paraprofessional staff were also the part of the searched literature. Data extraction and critical appraisal were performed to determine the risk of bias of each study.

Findings: The studies proved that motivation and job satisfaction had a very positive impact on the job performance and library services of library paraprofessional staff working in different academic libraries. Mostly, the literature regarding motivation and job satisfaction of library staff got published from Nigeria. However, some studies were also found Ghana, Bangladesh, Sri Lanka, Tanzania, Jammu & Kashmir, Kuwait, India and South Africa. In general, studies were research papers with quantitative research approach. Survey research method was used. Most of the studies developed their structured questionnaires rather than using pre-developed scales i.e. MAWS (Motivation at Work Scale developed by Forest et al., 2010) and JSS (Job Satisfaction Survey developed by Specter, 1985). The critical analysis of the studies demonstrated that allowances, promotions and in-service training are the key factors of motivation for the respondents. Nature of job, job security, fringe benefits, leadership styles and technological awareness are the main factors for job satisfaction among library staff. It is interesting that motivation itself is a big source of job satisfaction for library personnel. However, extrinsic motivation in term of benefits and rewards has a great impact on job satisfaction as compare to intrinsic or inner motivation.

Originality/Value: This systematic review is the first on motivation and job satisfaction of library paraprofessional staff. The results of the study has practical implementations for the administration of academic libraries to pay heed and take major steps to motivate and satisfy their library support staff to get better performance and services from them.

Keywords: motivation, job satisfaction, library services, job performance, systematic literature review, library paraprofessional staff, Pakistan

Motivation, Self-efficacy and Perception of Graduate Students on Information Literacy Courses

Qianxiu Liu

Master Degree, Faculty of Library, Information & Media Science, University of Tsukuba, Japan

Abstract: As potential professionals in the field of scientific research, graduate students are required to expand their knowledge reserves using information resources and deepen academic research by critical thinking. Particularly, good information literacy (IL) skills are essential. A wealth of literature has studied the motivation, self-efficacy and perception of undergraduates. However, rare researches focus on graduate students, especially the fresh graduate students. In this research, combined with the motivation triangle model (Colborn, N. W., 2013) and Framework for Information Literacy for Higher Education (ACRL, 2015), a mix design with the graduate students is developed. It aims to explore the motivation, self-efficacy and perception of master students. The research questions are listed below:

1. Why do graduate students take the IL course?
2. To what extent do graduate students evaluate their IL skills?
3. What do graduate students think are the requirement contents in IL course?
4. Who do graduate students think is the most appropriate person to teach IL course?

5. What do graduate students think are the most suitable approaches of teaching IL course?

The data were collected through questionnaire and interview. A total of 405 questionnaires were returned in a research university of China. The results showed high intrinsic motivation and self-efficacy of graduate students on IL. In other words, the importance of IL in their future academic road was aware of. However, only 2.96% students considered librarians as the most appropriate person to teach IL. Furthermore, most of the participants selected lectures with group work as the most suitable teaching approaches, rather than online-learning. They also reached an agreement that IL course should not be limited to basic information literacy (e.g., research strategy, knowledge of and searching in the relevant resources), but needs to cover study skills and techniques. This study will provide a reference for practitioners to use or design IL curriculum, as such to offer the teaching strategies and experiences that motivate students to learn and apply IL skills. To collect data with instructors who teach IL and hence explore the gap between students and instructors becomes necessary in future research.

Keywords: information literacy, motivation, self-efficacy, perception, graduate students

References

- Association of College and Research Libraries, 2015. Framework for Information Literacy for Higher Education. Available from <http://www.ala.org/acrl/standards/ilframework> (Access on January 20)
- Colborn Wootton Nancy, 2013. The motivation triangle affecting change in students learning in credit IL courses by examining the student, the course, content and the teacher, chapters in Hollister, C. V. (Ed.), 2013. *Best practices for credit-bearing information literacy courses*. Association of College & Research library.

Musical Documentary Heritage in Spanish Defence Central Library: A Project of Online Exhibition for its Dissemination

Rosario Arquero-Avilés¹ and Brenda Siso-Calvo²

¹Head of IdeaLab Research Group, Department of Library and Information Science, Complutense University of Madrid, Spain

²IdeaLab Research Group, Department of Library and Information Science, Complutense University of Madrid, Spain

Abstract: The Spanish Ministry of Defence has a Network of Defence Libraries (RBD) which, created in 2008, includes all the libraries and documentation centres with the aim of preserving and disseminating the Ministry's bibliographic heritage.

The libraries of the RBD are public information centres specialized mainly in security, defence and armed forces, engineering, legislation, as well as scientific or general contents. The collection of the 223 centres belonging to this network consists of a total of 3,729,873 volumes.

Despite the documentary wealth of the network, its heritage is largely unknown to society in general.

In order to enhance the value of library services, as well as to promote contents related to historical events, a collaborative project has been created between the Spanish Ministry of Defence and the research group IdeaLab-UCM (Complutense University of Madrid, Spain).

The main goal of the project is the generation of a virtual exhibition of the Spanish expedition 'The first circumnavigation of Earth' in order to promote its diffusion through the digital setting.

The project involves developing several technical and research tasks aimed at the identification, compilation, systematisation and analysis of musical documentary heritage kept in the Spanish Defence Central Library (as a member of the RDB).

The methodology consists of three main phases: document-based identification and analysis, planning the repository for the exhibition of digital objects and dissemination of results.

The main results of such a research project show that it is possible to exploit documentary resources to create new products to disseminate the culture through library services.

National Heritage and Retrospective National Bibliography Activities in Sri Lanka

W. Punyawardena

Senior Assistant Librarian, Wayamba University of Sri Lanka

Abstract: The Retrospective National Bibliography (RNB) can be defined as a bibliography, which list publications printed and published in the past. Its upper limit of currency of a National Bibliography is two years before the date of publications of particular volume. According to **Encyclopedia of Information and Library Science (1993)** retrospective bibliography is “Refers to a bibliography which lists books published in previous years as distinct from a ‘current’ bibliography which records books recently published. Also known as a closed bibliography”. The problem of the study was not aware of the RNB and its projects/ activities in Sri Lanka. The objectives of the study were to identify the RNB projects/ activities and examine its usefulness for the people in Sri Lanka. This is an historical study that evaluated the RNB activities in Sri Lanka at National level. The activities of RNB have been carried out by the National Library of Sri Lanka at present National Library and Documentation Services Board (NLDSB), National Archives and Individual Retrospective National Bibliographers in Sri Lanka. Two information sources and seven library collections namely Ceylon gazette part V (quarterly issues include information of books printed in Sri Lanka and registered at the Department of National Archives under the Printers and Publishers Ordinance, 1885). Bibliography of Ceylon by H.A.I. Goonetilake NLDSB, Department of National Archives Library, National Museum Library, Royal Asiatic Society Library, University of Peradeniya Library, Department of Archaeology Library, Colombo Public Library and bibliographical tools available in those libraries were searched to collect data for the study. Interviews were also conducted with the bibliographers, Head of the Departments and librarians of particular institutions. The study population was the total number of books printed/published in Sri Lanka from the year 1885 to 1962. All books printed during this period had been listed and compiled as RNB annually for the success of the project. The study revealed that the NLDSB was the principal body which has been conducting the RNB project as a National level program from 1990. Although the other institutions and libraries have not been conducting RNB activities in project level, the relevant information could be obtained from those institutions. It is also revealed that many books could not be found due to unavoidable circumstances in this period. The researchers, book publishers, librarians, university students and educated public are the users of RNB. The usefulness of RNB as the past intellectual heritage for present research is one of the major uses of the retrospective national bibliography. RNB can, therefore, be used as a guide in making use of national heritage and helpful in conducting studies on the literature of those

periods. It is also useful for researchers and scientists who seek information within a particular period of time. Literature of the past and present can be compared and planning can be done for the future. For example, in the year 1962, 75% of the publications published were on religion, sociology and literature. It is very important to investigate the historical heritage in the national development of a country. The finding of the study will benefit library authorities and policymakers, researchers and compilers of national bibliographies for preserving National heritage of Sri Lanka.

Keywords: literature, national bibliography, national heritage, retrospective national bibliography, library science

New Approach to Information Literacy Instruction: An Experimental Study

Marzieh Siamak¹ and Dr. Alireza Isfandyari-Moghaddam² and Dr. Tibor Koltay³

¹PhD student, Department of Knowledge and Information Science, Islamic Azad University, Hamedan Branch, Iran

²Supervisor, Chancellor of Islamic Azad University, Aliabad Katoul, Iran

³Advisor, Professor of Information and Library Studies, Szent István University, Hungary

Abstract: Given the importance of information literacy skills in lifelong learning, there is a need to determine how to best design information literacy instruction in order to help students locate, evaluate, and use information more effectively. The main purpose of this study is presenting a new approach to information literacy instruction and assessing the effectiveness of it. For this purpose, first phase, the researcher proposes a model for information literacy instruction. Second phase, the researcher is assessing its effectiveness. For the assessing effectiveness, experimental study examined whether information literacy skills instruction designed using the Siamak model increased the participants understanding and application of information literacy concepts. The experimental group received an instruction session based on the Siamak model, and the control group received an instruction session. The analysis of the results of pre- and post-test scores and scores will show that whether it is significant difference between the two groups.

Keywords: information literacy instruction, information literacy model, critical thinking, creative thinking, emotional intelligence, information and knowledge management, students, Payame Noor University of Ashtian, effectiveness assessment

New Data on Knowledge and Application of Information Literacy Framework in Higher Education Libraries: Results of a Questionnaire Survey to Portuguese Librarians

Tatiana Sanches¹, Maria Manuel Borges²

¹Universidade de Lisboa, Instituto de Educação, ApPsy, ISPA, Instituto Universitário, Portugal

²Universidade de Coimbra, Faculdade de Letras, Departamento de Filosofia, Comunicação e Informação, Coimbra, Centro de Estudos Interdisciplinares do Século XX (CEIS20), Coimbra, Portugal

Abstract: Information literacy remains a pattern of integrated competencies that contemplate the reflexive discovery of information, and the understanding of how we produce, value and use information in an ethical and legal creation of new knowledge.

In 2016, the ACRL adopted the new Framework for Information Literacy for Higher Education, which opened up space for pedagogical changes in education and training in Information Literacy. However, the new Framework transformed the basics of Information Literacy - researching, locating, selecting and using information -, into more comprehensive, connected, and flexible implementation, and not just a set of standards or learning outcomes. The Framework structure is a set of conceptual frames that integrate goals and concepts that students must achieve and overcome to guarantee the development of genuine knowledge in a subject or knowledge domain. Each of these frames includes a knowledge practice section used to demonstrate how the domain of the concept leads to its application in new situations and the creation of more knowledge. It also includes a set of provisions that work the know-how in the learning process.

This Framework intends that information professionals explore concepts, practices, and dispositions around the information. The behaviours that evidence the competencies in information literacy in the academic scope are known as knowledge practices; students' preferences and attitudes about how they learn are considered as dispositions.

In this study, we intend to apply a survey to the higher education librarians in Portugal. The aim is to collect the information about the six conceptual frameworks that make up the Framework: (i) to evaluate the librarians' understanding of the concepts, knowledge practices and dispositions that include it and (ii) to verify the level of application of these competencies in the formation of users. The guiding question that librarians must answer is: "I understand and apply these concepts when teaching skills in Information Literacy", applied to each of the frames:

- Authority is Constructed and Contextual
- Information Creation as a Process
- Information has Value
- Research as Inquiry
- Scholarship as a Conversation
- Searching for Strategic Exploration

Applying the Framework into the teaching of Information Literacy by librarians will certainly be beneficial. This is because when incorporated in a flexible way, it adapts to each specific reality, allowing to match the training needs of users in different contexts. It is important to realize to what extent Portuguese librarians understand these gains and are taking advantage of them. These findings are important to find and raise recommendations for best practices in Information Literacy training, namely using the ACRL Framework.

Keywords: information literacy, higher education, teaching-learning, ACRL Framework, librarians

Non- LIS Organization's Initiative for Capacity Building of LIS Professionals in India

Salek Chand

National Documentation Centre, National Institute of Health and Family Welfare, India

Abstract: Library and Information Science (LIS) education in India have completed 100 years in 2011. It is a historical fact that the first university in the world was established sometime in the 7th century B.C. at Taxila (then in India and now in Pakistan). The original name of the place was 'Takshashila' which means 'carved

stone'. Taxila is its corrupted version followed by the second university founded in Nalanda in India in the 5th century B.C. The great library of Nalanda University was so vast that it is reported to have housed more than 9 million manuscripts.

The beginning of the 20th century marked the beginning of LIS education in India. In India the existence of in service training was initiated by John Macfarlane, the first librarian of the Imperial Library (Now National Library) at Calcutta from 1901-06. In 1911, Siyaji Rao Gaikwad (1862-1939), the ruler of Baroda state called the American librarian Mr. William Allenson Borden (1853-1931), a disciple of Melvil Dewey to create a cadre of men for the newly established libraries in the state library system. In 1912, he initiated the first training school in library education in India. The first one year course which was conducted in the central library, Baroda consisted of eleven students of 'high ability', of which 8 were men and three women. In 1913, another training class for working librarians of town libraries was started. These classes continued even after the departure of Borden.

At present in the area of Library and Information Science, 120 universities are offering Bachelor of Library and Information Science (BLIS) degree, 78 are offering Bachelor of Library and Information Science (BLIS) and Master of Library and Information Science (MLIS) degrees both, 21 are offering two year integrated course, 16 universities are offering Master of Philosophy (M Phil) degree and 63 are offering Doctorate of Philosophy (PhD) degree. In addition to this, many Non-LIS institutions are also contributing their expertise for the further advancement in LIS field. This article deals with those non-LIS institutions who are not providing any regular courses but in addition to their regular courses in the concerned area, these are also contributing their expertise in conducting various short term training courses, workshops, seminars, lectures etc. in the field of Library and Information Science for enhancing the knowledge and capacity building of working LIS professionals. In this series, Tata Energy Research Institute (TERI) has been organizing International Conferences on Digital Libraries since 2004; National Informatics Centre (NIC) conducts various Training courses for LIS professionals (Beginners and Experts) to orient and enhance the knowledge about the various Biomedical Information Retrieval Programmes and also organized workshop on E-publishing and digitization; The National Institute of Health and Family Welfare (NIHFW) has been organizing a five days Training Course on IT Application in Libraries and Information Management to enhance the knowledge and skills of LIS professional in using Latest Information Technologies; Delhi College of Engineering (DCE) also organized one day seminar on Sensitization Workshop on Information Literacy. Similarly; many LIS Professional Associations are actively involved for furtherance and improvement of LIS Profession and Professionals in India, like Indian Library Association (ILA), Medical Library Association of India (MLAI), Indian Association of Special Libraries & Information Centres (IASLIC), Indian Association of Teachers of Library and Information Science (IATLIS), Society for the Advancement of Library and Information Science (SALIS), Library Professional Associations (LPA), Society for Library Professionals (SLP) and others through conducting conferences, seminars, workshops, lectures series, meetings, training courses, etc. For developing the leadership competency and managerial capability of LIS professionals, many networks are also doing a tremendous task for LIS professionals like Information and Library Network (INFLIBNET) organized Convention on Automation of Libraries in Education and Research Institutions (CALIBER) international convention every year by in different parts of the country in collaboration with different universities. Similarly, Developing Library Network

(DELNET) organized its Annual Convention called National Convention on Knowledge, Library and Information Networking (NACLIN) in different places of India since 1998 for offering and consulting services and training in library automation, digital libraries, digitization and database creation, retro-conversion of records into machine readable form, standards, Interlibrary Loan and Document Delivery Services. Present article throws light on some of those Non-LIS organizations which have taken initiative towards capacity building of Library and Information professionals in India.

Keywords: non-LIS organization, capacity building, library associations, library network and consortium

On the Introduction of AI and Robots into the Operation of School Libraries

Mutsumi Oohira¹, Rei Iwasaki², and Tetsuya Kubota³

¹Kyoto Sangyo University, Japan

²Kyoto Notre Dame University, Japan

³Dai Nippon Printing Co., Ltd., Japan

Abstract: In line with the School Library Act (enacted in 1953), all schools in Japan have a school library. School libraries are required to function as “reading centers” and “learning and information resource centers”, and “planned utilization of the school library” is indicated in the government’s official curriculum. Although it is a governmental expectation that school libraries are utilized as learning and information resource centers that support school children’s independent learning activities, there are problems with their active utilization in this way. This paper identifies two problems: 1) staffing related to routine operations such as allowing school libraries to remain open; and 2) a lack of resources that can be utilized in lessons. In 2014, the School Library Act was revised, and with the intention of improving and upgrading the operation of school libraries, it was decided that efforts should be made to put school librarians in place to contribute to better promotion of proper use of school libraries by school children of all ages, as well as by teachers. Although there has been progress with staffing, in the majority of publicly run schools, teacher-librarians act as homeroom teachers or teach other areas of the curriculum as well, leaving them with barely any time to engage in library-related tasks, while almost all school librarians are irregular employees who, in many cases, work between one and three days a week. Regarding the lack of resources, funding has been made available for school libraries, including in a five-year plan for proper school library provision from 1998, and the main reason for the lack of resources has been an inability to select and collect appropriate library resources because of inadequate staffing, as mentioned. Based on the experience of introducing robots into university libraries, we propose the introduction of AI and robots into school libraries for their effective and efficient operation. This would alleviate the problems above and, with the school library as an open resource for schools, allow high-caliber professionals to concentrate on services that require their specialist skills and to support reading and learning activities among school children of all ages and educational activities among staff.

Ontologies and Classification: The Unavoidable Interplay between Human Reasoning and Machine Reasoning

Maurício B. Almeida¹, Benildes C. Maculan², Eduardo F. Ribeiro³

¹Associate Professor, Graduate Program in Knowledge Management and Organization, School of Information Science, Federal University of Minas Gerais, Brazil

²Adjunct Professor, Graduate Program in Knowledge Management and Organization, School of Information Science, Federal University of Minas Gerais, Brazil

³Ph.D. candidate, Graduate Program in Knowledge Management and Organization, School of Information Science, Federal University of Minas Gerais, Brazil

Abstract: Ontology is a vigorous subject widely studied in different research fields and applied in several knowledge domains. Even though the term “ontology” has roots in Philosophy, nowadays its meaning has evolved to include other connotations. Within Computer Science, it encompasses activities to develop software engineering artifacts, mainly in Artificial Intelligence field; within Information Science, mainly in Knowledge Organization field, it represents a hierarchical structure based on concepts and relations for purposes of Information Retrieval. Despite the widespread use of the term, it is not so clear how ontologies can be useful in Information Science, a field with an already well-established tradition of conceiving systems of categories. This paper aims to unveil the essentials of ontological theories, in order to clarify its application in the scope of classification. First, we introduce the main current uses of ontologies and describe two of the most important foundational ontologies. Then, we seek to clarify to what extent automatic reasoning can replace human reasoning – totally or partially – in classification. In order to reach such clarification, we include another currently popular Artificial Intelligence approach, namely, machine learning algorithms; then, we distinguish it from ontology reasoners. We explain the operation of both approaches and present examples of their application in classification. We also distinguish the limits of automatic classification in different contexts and characterize the differences of use between both machine learning and reasoning algorithms, while acknowledging the need of human assistance. Finally, we offer our view of opportunities for interdisciplinary research. As a result, we intend to add another instance of research to the field of Knowledge Organization, and further contribute to the dissemination of the use of ontologies for automatic classification in Information Science.

Keywords: ontologies, automatic classification, machine learning, artificial intelligence, knowledge organization

Organizational Performance in University Libraries: A Comparative Study between Mexico and Spain

Mtra. María del Socorro Encinas Grijalva¹, Dr. Juan Carlos Marcos Recio², Dra. Dora Yéssica Caudillo Ruiz¹, Mtro. Rubén Federico Martínez Rocha¹

¹CETYS Universidad, Tijuana, Mexico

²Universidad Complutense de Madrid, Spain

Abstract: Nowadays, university students hope to be able to find and access information from anywhere. In university libraries this poses challenges, which have an impact on its structure, both physical and conceptual. As we move into digital age, libraries are not only modernizing in their physical aspect, but they are also taking advantage of new technologies. But there is still much to be done, therefore, libraries have to rethink their

processes based on an analysis of their organizational performance. Traditional and digital libraries continue to be basis of research processes and are a reference in recovery of necessary and timely information according to needs of users. Access and use of digital tools, Big Data, artificial intelligence and Internet of things are part of our everyday reality, so it becomes necessary for libraries to remain at the forefront in order to respond to the needs of a new social context. Web 2.0 and use of state-of-the-art technologies offer libraries a new opportunities to attract users and therefore integration of mobile applications is one of the best practices that can be adopted. The organizational performance of a library has a relevant role that directly impacts the user, and this can be identified from the measurement of organization informational flow, from performance indicators of library staff and the level of satisfaction of users, results that will allow to identify an organizational performance libraries level. This research work consists of an organizational performance of a comparative analysis in Mexican and Spanish university libraries. Study was carried out in CETYS University Library in Mexico and Complutense University of Madrid Library, Spain. The method used for data collection was by means of a questionnaire which was applied to libraries staff, as well as to students of both institutions, with to objective to measuring the performance of librarians in relation to service that is expected of them for facilitate access to information. Data was analyzed from a qualitative perspective and results were obtained in which it was identified that internal and external factors affected organizational behavior of both libraries. In a case like this, it was identified that internal factors are directly related to attitudes, behaviors and traditions, elements that make up the Information Culture, knowing that it recognizes value and usefulness of information to achieve operational and strategic success, where Information is basis of decision making itself that causes effective information systems.

Keywords: university libraries, organizational information, information culture, organizational performance

Overview of the Growth and Development of Services Provided by Virtual Library of Serbia Network and its Impact on Collection of Library Statistical Data in Serbia

Emina Čano Tomić and Ljubica Ljubišić

National Library of Serbia, Serbia

Abstract: Virtual Library of Serbia is a project linking Serbian libraries into a single information system based on the COBISS platform, allowing shared cataloguing, access to foreign databases and automation of all library services. The network was launched in 2003. through establishment of a shared union catalogue integrating the bibliographic catalogues of the four largest libraries in the country (it was actually re-lunching, since we had first attempt to develop such a network from 1988 to 1992 in former Yugoslavia).

In 2006 the web application E-CRIS.SR was developed in compliance with the CERIF recommendations. It is established as a register of researchers and organisations within the national library information system, and COBISS.Net regional network.

After fifteen years, the system has grown to include more than two hundred libraries (2 national, 94 public, 83 university/academic and 23 special libraries).

In this paper we present and overview of the growth and development of the network and demonstrate all advantages of library networking for collection of data and processing of all kinds of libraries related statistical information in Serbia.

Keywords: libraries statistic, VBS network, COBISS, Serbia, E-CRIS.SR

Perspectives of OA and Cancer Researchers: Analysis of Selected Publications

Christie Wiley

University of Illinois Urbana-Champaign, USA

Abstract. Open access (OA) proposes free access and substituting submission fees. Journal publishing business models offer the traditional model and OA model. The majority of researchers support the ideals of OA. Most recently, Springer-Nature revealed the slogan “Your research, your rights”, on its website. Academic publishing is a global business responsible for more than technical management of publication and peer review processes. Traditionally academic publishers regard universities, libraries and institutes of primary markets. Yet market systems are changing. This change has created new technology, platform, user needs and markets to make scientific findings visible to a global world. Journal publishers seek to publish well-written, properly formatted research articles that meet community standards. In so doing, publishers have assumed a role in which they remind researchers of community expectations and enforce behaviors seen as advantageous to the progress of science. While current literature reveal the study of open access in social science and its implications for libraries. Few studies address this issue in physical science and medical disciplines. This article examines sixty publications in science and medical journals to better understand the current state of open access, research data sharing policy and implications of Plan S. Examining the state of scholarly communication within science and medical journals provides an opportunity to determine trends, issues, and adjust expectations, services, and/or recruitment strategies as appropriate as data librarians, and as academic libraries.

Keywords: open access, science, cancer research, academic libraries

PhD Programme in Information and Communication Sciences at the University of Zagreb

Nikolaj Lazić, Jadranka Lasić Lazić, Sonja Špiranec

Faculty of Humanities and Social Sciences, University of Zagreb, Zagreb, Croatia

Abstract: Ideas for the creation of a coherent and cohesive European Higher Education Area based on the Bologna Declaration were launched at the highest political level. Reforms that affected the entire European space with the idea of contributing to the development of society through mobility, openness and quality, focused specifically on doctoral studies. A discussion on the structuring of doctoral programs was initiated by the Conference of Ministers in Berlin (2003), after which a series of conferences and seminars were organized, giving guidelines and principles for modeling doctoral studies in the EU. They are conveying ideas about common goals that will contribute to the development of society, and make the European scientific space comunal. These changes that affect the entire society are based on information and communication technology; the transfer of information and knowledge, the rapid communication of research results via the Internet, and at the same time education is postulated as the strongest segment of creation and mediation of knowledge that alters the entire

community. In such an atmosphere, doctoral education at Croatian universities is also being reformed. Despite the fact that reformist thinking has been introduced into the field of doctoral education in all areas of science, fields such as information science enter the process of change and restructuring intensively and deeply since it is a young and extremely interdisciplinary field.

The aim of this paper is to present the development and especially the conceptual and structural features of today's doctoral programme of information and communication sciences at the University of Zagreb. Since the analysis of doctoral education is inseparable from reflecting on the scientific/research identity and the profile of the scientific field, the paper will try to answer the question of the theoretical assumptions and doubts that formed the conceptual basis of today's reformed doctoral degree programme of information and communication sciences. Internal structure of the programme will be analyzed through its strategic guidelines which is the result of theoretical considerations and the described strategic determinants and European scientific policy.

Approach / methodology: This paper uses qualitative approaches to literature analysis that problematise the theoretical profile of information and communication science field and examines the guidelines of doctoral education in the EU, to present problems and solutions in the restructuring of doctoral education in this field.

The results: The paper expects to, through a systematic review of the conceptual and structural determinants of the Ph.D. study at the University of Zagreb, argue our thesis that reform efforts are inseparable from thinking about the theoretical scope and the scientific field profile, that in the structuring of the program solutions must be found for intellectual and theoretical dispersion in the information sciences and that the EU guidelines on doctoral education provide modular approach to the design of the programme.

Keywords: PhD programme, information sciences

References

Communiqué, Berlin. (2003, September). Realising the European higher education area. In Communiqué of the Conference of Ministers responsible for higher education in Berlin on 19 September 2003. <https://enqa.eu/wp-content/uploads/2013/03/BerlinCommuniqué1.pdf>

The Physical Library Space as a “Third Place” for Socialization and Collaborative Learning in the New Digital Era

Angeliki Garoufali¹, Eleni Ntrogouli¹, Vasileios Batalas²

¹Library and Information Centre of University of Thessaly, Greece

²DataScouting, Greece

Abstract: The Academic Library as a physical space is the heart of the university community. Nowadays moves away from traditional missions and goals by using smart technologies and smart learning tools. But, which is the role of the natural space when users don't have the need to visit the physical place in order to use the sources and the services provided?

This study refers to the changes that have occurred in the environment and the behavior of library users during this transition. Furthermore, examines the role as a "Third Place" at the university and how this role is balanced between the social factor and technology. It also aims to promote the contribution of the Academic Library to the creation of social networks within its natural environment, which is not only provides study and research, but it also functions as the part of the creation of multicultural societies,

cultural activities and collaborative study according to modern educational, psychological and social perceptions.

The important role of Academic Library being a «third place» is reinforced in the view that ,spatially, connect people, contributes both socialization and collaborative learning , and facilitates the stakeholders through new ways of managing new data. The methodology used in this research includes analysis of scientific sources refers to examples of libraries that have been transformed successfully into “a third place”.

Keywords: academic library, physical space, third place, socialization, collaborative learning

The Power of Proactive Information: A Prototype of Mobile Application for Bring the Value of Library Services to the Parliament

Luis Armando González, Adolfo Hernández and Teddy Alfaro

Library of the National Congress, Chile

Abstract: Parliamentary libraries are part of parliaments and provide products and services of information related to its main role, which is to support the parliamentary work in law making, government oversight and district work, the citizenship use a part of these products or services available to the society. The Library of the National Congress of Chile delivers great part of its information services to the parliamentary community (parliamentarians and assessors), in the form of Web Systems and research documents generated from library technical assessors in subjects of legislative interest. The Library has as one of its main objectives to reach the Library 4.0 to achieve its modernization, i.e. to establish a modern and innovative library based on solid technological pillars, arising from Industry 4.0 using modern technological tools for data and information processing and use with a sense appropriate to collaborate with the parliamentary work.

In this context, the need arises to modernize the way in which the Library delivers its products and services to the parliamentary community, to give them a proactive and permanently updated service, allowing us to answer a question tending to determine the effectiveness of the provided services. This research question is what is the way for the Library to delivers a better service to the parliamentary community, and indirectly to the citizens, to achieve an effective use of the information products and services provided?

The answer to this question is to implement a technological solution that brings information products and services closer to the parliamentary community through a mobile application installed in their respective smartphones or mobile devices, according to [1] consumption online is the form for distribute the parliamentary outputs, and all online content should be suitable for mobile devices. In this way, the Library will have its main products and information services in the palm of the hand of Parliamentarians and assessors, achieving greater efficiency to deliver its services proactively and according to the possibilities of new technologies, without waiting for parliamentarians ask to explicitly for require these services. For extension, with the safeguarding of access roles, the same mobile application will deliver public information to the citizens. Considering the concepts of Library 4.0 [2], this mobile

application contributes to provide ubiquitous to the library, in the Massive Data Library and Context Aware dimensions.

The main objective of this paper is to present the key guidelines, used for the IT team of the Library for design, develop and implement the mobile application with its information services oriented to the parliamentarian community and the citizens who are users of the library.

The implementation of this prototype application, still in phase of white march, will allow us to determine the main used services by the Parliamentarians and their assessors, their interests, and the fieldwork. With this tool, we will be able to know better our Parliamentarians and thus offer products and services according to their needs, for contribute to a parliamentary community more informed and with a new tool useful for their legislative work.

Keywords: proactive information, parliamentary libraries services, mobile application

References

[1] Digital Democracy Commission UK Parliament, "Open Up! Report of the Speaker's Commission on Digital Democracy", 2015, <http://www.digitaldemocracy.parliament.uk/>

[2] Younghee Noh, "Imagining Library 4.0: Creating a Model for Future Libraries", *The Journal of Academic Librarianship* 41 (2015) 786–797, <https://doi.org/10.1016/j.acalib.2015.08.020>

Preparing, Not Repairing: A Case Study and Best Practices in Proactive Link Management

Leah P. Cannon, Brianne Dosch, Hannah Gunderman

University of Tennessee, Knoxville, USA

Abstract: LibGuides are widely used in academic libraries to organize information and resources to better serve their users. Despite this valuable utility, the maintenance of LibGuides across many different academic libraries ranges from neglectful to fastidious, making it difficult to determine the accuracy and helpfulness of information on LibGuides (Randtke & Burrell, 2012). This difficulty with LibGuide maintenance was encountered by a research team who were measuring the impact of their data management research (What is DataONE, n.d.) by using a Scrapy-based Python script to crawl LibGuides from ARL (Association of Research Libraries) institutions for mentions of their work. They were able to successfully run their script and measure their research impact, but also discovered the potential for user frustration and dissatisfaction at the varied level of maintenance which exists across LibGuides, specifically related to "link rot." Using the results and the links from the Python script project as a case study combined with a review of the literature, this paper will discuss the best practices of maintaining LibGuides, specifically practices that are replicable across institutions, cost effective, and can proactively fight link rot. A Scrapy-based Python script developed by the SIS Programming Team was used to crawl the LibGuides of each academic library member of the ARL. Of the 116 domains crawled, 70 returned links to sites on the dataone.org domain (which was the domain being sought for the research impact project). 371 total links were found using this method, and the HTTP status code of each of these links was tested using a second Python script. Of the 371 links found and tested, two returned a 404 status code (not found), 127 returned a 301 status code (moved permanently) (HTTP Status Codes, n.d.). All other sites returned a status code of 200 (OK) (HTTP Status Codes, n.d.). These results from the script led the research team back to review the links and current literature to establish best practices for effective LibGuide maintenance. Jurewicz and Cutler noted

that “as websites have grown in complexity, the time-consuming process of coding HTML pages has become a huge task” (p. 76). Fifteen years later, even though current technologies have made the task easier, the number of web sites is growing and increase by millions every year (Netcraft, 2018). Lib Guides, being among those millions of sites, are also increasing in complexity and frequency. Therefore, it is becoming increasingly important for libraries to follow the best practices of proactively maintaining Lib Guides rather than a reactive position, or just abandoning them to link rot and disuse. Maintaining link validity in LibGuides is a proactive and strong first step toward patron satisfaction, and using a combination of scripts and manual processes can be a proactive way to monitor link validity and fight link rot. As Raub and Liao state, “the uncertainty and volatility involved in customer service require frontline employees to take personal initiative to anticipate customer needs, prevent and remove potential obstacles in service delivery before a problem ‘hits the surface’” (2012).

Keywords: libguides, link rot, dataone, python, link validity

References

- HTTP Status Codes. (n.d.) Retrieved from <https://httpstatuscodes.com/>
- Jurewicz, L., Cutler, T. (2003). *High tech, high touch : Library customer service through technology*. Chicago: American Library Association.
- Mortimore, J., & Minihan, J. (2018) Essential audits for proactive electronic resources troubleshooting and support. *Library Hi Tech News*, 35(1), pp.6-10. Retrieved from <https://doi.org.proxy.lib.utk.edu/10.1108/LHTN-11-2017-0085>
- Netcraft. (2018, November 26). *November 2018 Web Server Survey*. Retrieved from <https://news.netcraft.com/archives/2018/11/26/november-2018-web-server-survey.html#more-26898>
- Randtke, W., & Burrell, M.D.. (2012). Tools for Reducing and Managing Link Rot in LibGuides. *Code4Lib Journal*, (17). Retrieved from <https://journal.code4lib.org/articles/7019>
- Raub, S., & Liao, H. (2012). Doing the right thing without being told: Joint effects of initiative climate and general self-efficacy on employee proactive customer service performance. *Journal of Applied Psychology*, 97(3), 651-667. doi:<http://dx.doi.org.proxy.lib.utk.edu/90/10.1037/a0026736>
- What is DataONE? (n.d.) retrieved from <https://www.dataone.org/what-dataone>

Problems in the Application of Innovations in the Library Sphere (The Bulgarian Case)

Evgeniya Rusinova

Assoc. Prof., PhD, SULSIT, Sofia, Bulgaria

Abstract: The paper presents a direct observations of different types of libraries in the country, as well as an analysis of the agenda of the Bulgarian library community. In the last twenty years, the theme about the innovations in the library sphere has become one of the main topics for the Bulgarian library college. The innovations are seen as an important tools for adapting the libraries to the changing requirements of the information environment, the technologies and the consumer interests. For the topicality of the theme are of great importance several international programs that provide short-term specialization for Bulgarian librarians abroad or the presentation of different innovative practices and foreign experience in this direction to librarians from different Bulgarian villages. These specializations and the direct acquaintance with foreign experience are a major source of innovation. Another way to get acquainted with innovative technologies and methods is the participation in international projects. On a third place, as a source of information, should be mentioned a foreign library publications (printed and electronic sources).

The innovations introduced in the Bulgarian libraries mainly concern some technological processes related to the provision of access to the library funds.

Another main direction of implementation the innovative practices is the work of popularizing libraries, attracting new users and realizing an advocacy. These are also the activities that have the main place of the library's agenda.

The topic of library innovation is well-known both at the annual scientific conferences of the Bulgarian Library and Information Association and at the other specialized forums of the library college.

At the same time, the introduction of innovations in the library sphere is accompanied with a number of problems. First of all, this is the lack of a national library policy. The scarce funding and the lack of planning doom to failure much of the attempts to introduce an innovation.

There are multiple one-time attempts to implement innovative forms of work or to use innovative technologies. In such an environment are strongly underestimated the feedback and the assessment when introducing some innovative practices. Normally, the novelties are found without being analyzed. It should be added that activities that were traditional for the Bulgarian libraries but were abandoned during the crisis of the country's library sphere in the first half of the 1990s, were often considered as innovations.

The observed practice shows that in order to overcome these problems it is necessary to combine the efforts of individual libraries (creation of consortium and co-operation), as well as the extensive application of quantitative and qualitative research methods. Several examples of the activities of regional and university libraries (in Sofia, Plovdiv, Veliko Tarnovo, Varna) show a lasting change in the situation of the libraries by applying innovations: visibility of the library in society, increasing the funding, expanding the user's circle, successful partnership at home and abroad. Also, the libraries conducting a planned and complete marketing policy are making a significant success on the path of introducing innovations.

Keywords: innovation, library college agenda, foreign experience, Bulgarian practice

Professional Development and Strategic Management in Libraries

Dr. Humera Mah Jabeen¹, Dr. Sajida Mah Jabeen²

¹Librarian, Govt Post Graduate College for Women, Sub Campus University of Gujrat, Satellite Town, Rawalpindi, Province Punjab, Pakistan

²Institute of Education and Research, University of the Punjab, Lahore, Punjab, Pakistan

Abstract: The survival and success of libraries will increasingly depend on their ability to ensure that they are “smart” at all levels rather than only at the top. The challenge of creating and sustaining ‘smart’ libraries with ‘smart’ people at all levels is probably greater now than it has ever been. Libraries are facing tough challenges. They require quite different set of attributes and skills than the current workforce and their organizational culture. This study investigated the relationship between strategic management and professional development in libraries. It was also designed to examine the impact of professional development on Information Technology based library projects and also the professional development affects on library services. To pursue these objectives, the researcher deployed the case study method. Only those Libraries were included in the sample which were rich in resources, have at least 0.1 million bound volumes, providing access to HEC digital Databases, had at least four professional librarians at the time of data collection. Selected libraries were either going through the strategic planning process or about to start on it. This study was a blend of qualitative and quantitative methods. Self administered questionnaire surveys and semi-

structured in-depth interviews were selected for data gathering instruments. The findings of the study revealed that the status of strategic management in Pakistan's libraries is deplorable. Majority of the libraries did not document their mission and vision statements. Evaluation and control is the area which needs attention. Information Technology development in libraries is overemphasized but not strategically planned. Librarians' ignorance about strategic management has been a significant factor hampering the successful development of IT projects for Pakistan's libraries.

Keywords: strategic management, information technology, library services, professional development

Project-Based Learning in an Advanced Library and Information Science Course

Szu-chia Lo

Department of Library and Information Science, National Taiwan University, Taiwan

Abstract: Project-Based Learning (PBL) is an instructional method characterized by the use of projects as a context for students to learn the acquired knowledge and problem-solving skills with attend to critical relations between motivation and thinking. The library operations evaluation courses at the Department of Library and Information Science (DLIS) at the National Taiwan University and the Graduate Institute of Library and Information Science (GLIS) at the National Chung-hsing University in Taiwan had been designed to include the use of PBL techniques to explore the efficacy of this method in an advanced LIS course. The course content addressing ideas and methods applied in evaluation of library operations. Of the eighteen scheduled class sessions, the first six were devoted to the coverage of methodologies, measurement and indicators for evaluation, the rest twelve were dedicated to the discussion on various empirical studies related to library operations, including collection development, information organization, reference services, information retrieval systems, library space, return of investment, ... etc. While the traditionally taught lectures were given, the students were working in groups to collaborate with librarians to target issues in library operations. The results of evaluation and suggestions were presented at the end of the courses, which the libraries could include in the further strategic plans. After completion of the course, the use of PBL had been evaluated by the students and the instructor.

Keywords: project-based learning, evaluation of library operations

Promoting a Culture of Assessment throughout the UCLA Library Organization

Dana Peterman¹, Sharon Shafer², Diane Mizrachi³, Todd Grappone⁴

¹Librarian, Digital and Distinctive Product Manager, Charles E. Young Research Library, University of California Los Angeles – UCLA, USA

²Librarian, Head of Search and Assessment, Charles E. Young Research Library, University of California Los Angeles – UCLA, USA

³Ph.D., Social Sciences Librarian, Interim Librarian for Jewish and Israel Studies, Charles E. Young Research Library, University of California Los Angeles – UCLA, USA

⁴Associate University Librarian for Digital Initiatives and Information Technology, Charles E. Young Research Library, University of California Los Angeles – UCLA, USA

Abstract: A recently created Library Strategic Plan at the University of California Los Angeles (UCLA) developed by all staff, identified the need to integrate a culture of assessment throughout all levels organization to encourage data informed decision-making. The Assessment for Change Team (ACT) was formed to spearhead this cultural evolution. This case study discusses how we create an assessment culture in a large, complex institution. The UCLA Library ranks among the top academic libraries in the United States serving 45,000 students in 125 majors. It employs over 100 librarians and approximately 350 full-time staff working in more than a dozen library across campus. Library units report to the University Librarian through four Associate University Librarians and management staff. ACT reaches out to the campus community units close to the university administration whose primary jobs employed assessment. We make campus ties to create an environment that influences and is influenced by the university's efforts. In conjunction with creating these ties, we offer workshops to all stakeholders that introduce assessment as a form of change management in a judgment free environment. We use online templates that guide assessment-motivated and administratively supported teams to work toward goals that are future-oriented. The workshops create a common vocabulary that guide people in a shared understanding and common course of action using methodologically sound research. Concurrent with the use of complex, dynamically-generated templates, ACT conducts individual sessions that influence changes in its template designs. The templates evolve iteratively, which improves their quality and stakeholder buy-in. Finally, we accelerate the buy-in of assessment for change by illustrating the impact of using these tools in decision-making that results in improved effectiveness, efficiencies, and better resourcing. We continue working with administration to ensure their support, mutual understanding of group goals, and affirmed understanding of the process of goal-setting and data-informed decision making. While ACT members assist staff with planning as consultants, we do not participate in projects unless we are members of the teams or groups who have formulated an assessment. The tool we use, called Data Lake, is an internally built dynamic set of templates using Confluence that includes a guided questionnaire for planning assessment, a repository of tools, indexed connections to raw data sets, and reports on assessment projects. We see our greatest challenge as developing a sustainable environment that enables the continuation of our efforts over time and that impacts our organizational culture. ACT members are librarians and library staff with numerous other responsibilities in their respective units who can rotate in and out annually. All leaders need to keep the topic of assessment in the forefront of interest and attention among staff, many of whom feel have competing obligations and are resistant to the time commitments necessary for proper assessment.

Provenance of Traditional Knowledge (TK) and its Preservation Special Reference to Sri Lanka

Kamani Perera¹, Prasanna Ranaweera²

¹Independent Researcher, Colombo, Sri Lanka

²National Institute of Library and Information Science (NILIS), University of Colombo, Sri Lanka

Abstract: With the emergence of information communication technologies novel methods have become available to safeguard the traditional knowledge for present and future needs. It is being discussed and different approaches have been taken to protect the vanishing traditional practices of knowledge in the fields of medicine, healing, literary, artistic or scientific works, performances, invention, knowledge creation and

all other traditional based innovations and creations etc. The indigenous people have established an exceptional link with the lands and environments in which they live and they have developed diverse methods of knowledge, innovations and practices to make use and running of organic variety on these lands and environments. In this context, Traditional Knowledge (TK) has been extensively used for the development of agricultural crop varieties and herbal medicines, that help for the wellbeing of the nation. Thus, safeguarding TK is very important in the field of health, food security and agriculture. In this manner, it is crucial to safeguard the know-how about the usage, content and viable supervision of different biological resources, specifically traditional crops, wild foods, and medicinal plants etc. It helps to build cultural uniqueness, identity, and social unity, thus decreasing vulnerability and poverty. Moreover, TK has been practiced from generation to generation as a living heritage and it can be defined as one way of preserving dying traditional knowledge. On the other hand, TK can be documented electronically and physically. Electronically preserved knowledge can be easily accessed through World Wide Web, while physically documented knowledge can be accessed via libraries and archives.

Keywords: traditional knowledge, preservation, ICT, Sri Lanka

Publications on Artificial Intelligence in Databases in the Field of Library and Information Science. Subjects and Research Problems

Jolanta Szulc

University of Silesia in Katowice, Institute of Library and Information Science, Poland

Abstract: Artificial intelligence understood as an “area of computer science that emphasizes the creation of intelligent devices that work like humans” (Technopedia, access: www.techopedia.com/definition/190/artificial-intelligence-a) is increasingly an inseparable element of Integrated Library Systems. The aim of the article is a qualitative and quantitative analysis of publications on artificial intelligence recorded in databases in the field of library and information science: Library & Information Science Abstracts (LISA) and Library, Information Science & Technology Abstract (LIST). The analysis covered 12023 records collected in the LISA database and 3734 records collected in the LIST database (as of 05.03.2019). Records were searched using the "artificial intelligence" search phrase. The article is divided into three parts. In the first part, the literature of the subject was analyzed due to the type of documents included (among others articles, reviews, reports, conference materials, bibliographies) and the sources of publications discussed. In the second part, on the basis of the analysis of abstracts, thematic categories were separated and discussed. In the third part, collected literature was subjected to quantitative analysis in the chronological cross-section. In conclusion, current research problems and conclusions were presented.

Keywords: artificial intelligence, library and information science

A Qualitative Survey of Canadian Academic Librarians on Diversity and Leadership

Maha Kumaran

Abstract: There is very little literature on Canadian visible minority librarians, particularly on leadership. Visible minorities, according to the Employment Equity Act, are "persons, other than Aboriginal peoples, who are non-Caucasian in race or non-white in color" (Employment Equity Act (S.C. 1995, c.44). According to Statistics Canada (2016), there are over seven million visible minorities and this number is expected to increase. Academic librarianship does not reflect this diversity.

There is general lack of policies or comprehensive diversity statements from Canadian national library associations and academic libraries towards recruiting, training, and retaining visible minority librarians. Canadian library literature (DeLong, Sorensen & Williamson, 2015; Kumaran & Cai, 2015) shows underrepresentation of visible minority librarians. Anecdotal evidence indicates that attrition rates of visible minority librarians are common. The author, Maha Kumaran, completed a sabbatical project surveying all Canadian academic librarians to determine their leadership and diversity perceptions. An electronic survey was sent in French and English. Kumaran's presentation will offer details on the data gathered and what they might mean for Canadian academic librarianship. Are there Canadian academic librarianship principles, practices, and policies that should be revisited and revised in order to recruit and retain visible minority librarians? Or, are there self-imposed or perceived systematic barriers that incapacitate visible minorities from attaining their career goals. The author hopes to have enough analysis completed to provide suggestions on possible pathways and solutions towards transitioning into an inclusive space for all librarians.

Keywords: visible minority librarians, Canada, academic librarianship, leadership

References

- DeLong, K., Sorensen, M., & Williamson, V. (2015). 8Rs Redux: Canadian Association Research Libraries human resources study. (2015). Retrieved from http://www.carl-abrc.ca/wp-content/uploads/docs/8Rs_REDUX_Final_Report_Oct2015.pdf
- Ingles, E., De Long, K., Humphrey, C., & Sivak, A. (2005). The Future of Human Resources in Canadian Libraries. Retrieved from <http://www.ls.ualberta.ca/8rs/8RsFutureofHRLibraries.pdf>
- Kumaran, M., & Cai, H. (2015). Identifying the visible minority librarians in Canada – a national survey. *Evidence Based Library and Information Practice Journal*, 10 (2), 2015.
- Statistics Canada. (2016). Visible Minority Population. Table on Number and proportion of the population belonging to a visible minority group, Canada, 2001 to 2006. Retrieved from <https://www12.statcan.gc.ca/census-recensement/2016/as-sa/fogs-spg/Facts-can-eng.cfm?Lang=Eng&GK=CAN&GC=01&TOPIC=7>

Quality and Qualitative Control of E-Learning Purposes in Greek Universities!

Vasiliki Kalliampakou¹, Ioanna Kalliampakou²

¹Library and Information Center, Athens University of Economic & Business, Greece

²Highest School of Pedagogical and Technological education, Greece

Abstract: In order to ensure investment in ICT-enabled pupils, additional conditions must be met. School policies should provide schools with the least acceptable ICT infrastructure, including a stable and affordable internet connection and security measures such as site filters and exclusions. Teachers' policies should focus on the basic skills of ICT in the use of ICT. Successful implementation of ICT requires the integration of ICT into each curriculum. Finally, digital content must be developed in local languages and reflect local culture. Continued technical, human and organizational support on all these issues is necessary to ensure access to and effective use of ICT.

The purpose of the study is to explore the views of the adult students on the relevance of the educational process.

Keywords: digital content, e-learning, information and communication technologies, quality, electronic applications, digital technologies, teaching, educational objectives, digital media, learning virtual communities

Quantitative Analysis of International Large Research Infrastructure Characteristics and Changes based on Policy Text

Yizhan Li, Shijie Guo, Zexia Li

National Science Library, Chinese Academy of Science, Beijing, P. R. China

Abstract: Large research infrastructures (IRs) have played an important role in expanding knowledge boundary and supporting the progress of cutting-edge technologies in the last decades, and attracted increasing attention from government, political decision makers and funders. Main countries in the world establish series of strategic plans, roadmaps or guidance documents about the construction, operation and update projects of IRs regularly. Usually, these policy texts give the earliest and systematic insights in the medium-/long-term plan, and describe but not limit to top-level design framework, strategic goals, science objectives/questions, science themes, challenges, new technologies, key performance parameters, management agencies, impact of social and economic of IRs. However, few studies have been devoted to metrics IRs from political perspective and explore the tacit information and trends. In this study, we filled this gap by applying scientometric metrics on policy text interpretation, and illustrated the common and characteristics of IRs' landscape of each country, the current hotspots of science themes and evolution trends, and the general challenges and problems. We collected the national IRs policy documents of main countries in the world during 2001~2018, including USA, EU (mainly European Strategy Forum on Research Infrastructures, ESFRI), Germany, France, UK and China, and constructed the raw policy text dataset. Then we designed a deconstruction and reconstruction method to extract the descriptive paragraph of each IR according policy content structure via python procedure, reclassified them into seven disciplines to eliminate the impact of difference in IRs' concepts and ensure the comparability under guidance of scientists and experts. NPL, co-occurrence analysis and cluster method were adopted to convert the policy text into textual data and reveal the relationship among countries and disciplines. Comparatively speaking, USA deployed many IRs in material science, particle physics and nuclear science, earth system and environment science, astronomy and space science, and archived plenty of highlight outcomes. European ESFRI landmarks had a critical position in life science and earth system and environment science. As the key network nodes, Germany and France made contributes to shaping this competitiveness of EU, as well as consolidating and cultivating unique research capability, for instance, constructing NGT FT to serve the innovation of transport industry. There were various hotspots and challenges in each IRs' research field with obvious disciplinary characteristics. Some IRs were dedicated and designed to solve explicit scientific questions. For example, IRs in the energy field, devoted to explore three issues: cleaning utilization of fossil energy, effective utilization of renewable energy and safe utilization of nuclear and fusion energy. It was the barriers for the current statue that boosting knowledge flows and investments from basic research to pilot, concerning better coordination of distributed IR and developing small modular reactor and high quality key components. But, the analysis suggested that lots

of IRs focus on the improvement of data-intensive scientific discovery capabilities recently, including not only high performance computing large facilities, but also integration of general or specific data research and sharing tools.

Keywords: large research infrastructure, policy text, scientometrics, evolution, challenges

Reading between the Lines

Madeleine Sturma

University of California, Berkeley, USA

Abstract: Academic libraries want to collect the materials most useful to researchers, yet how can they know if they're successful? While UC Berkeley's George and Mary Foster Anthropology Library gathers statistics on which books circulate, there is no current data on how these materials are being used to further the discipline of anthropology through employment in current research endeavours within the department. In this presentation, we examine the sources that Berkeley a) anthropology faculty members, b) graduate students writing dissertations, and c) undergraduate honors theses students chose to read and cite when conducting their research. The dataset we are using combines three smaller datasets representing the years between 2008-2018. For this, we cleaned and standardized the three datasets, including 4996 citations from 119 of 253 faculty articles and chapters published in 2013-2017, which were indexed in Scopus; 27260 citations from 87 of an estimated 150 anthropology dissertations written at Berkeley in 2008-2015, which were deposited with Proquest Dissertations, and 5605 citations from 114 of an estimated 210 honors theses written in the anthropology department in 2008-2018, which were deposited in the anthropology library. In total, this dataset includes 38,000 citations from 320 scholarly works within the department. Using these faculty and student citations, we analyzed and compared research materials being cited paying particular attention to the research level and sub-discipline of the academic, as well as the most popularly cited languages, journals, authors, and publishers. By studying relationships among and patterns in the anthropological research sources being cited in our department, we as librarians can garner a more comprehensive understanding of what materials are most valuable to researchers of all academic levels and anthropological sub-disciplines. As such, we are provided with the opportunity to better target our collection development as librarians. The cleaned dataset, additionally, functions as a source on citation patterns in anthropology; illustrating trends in the usage of particular materials based on timeframe, academic level, and subdiscipline.

Reimagining the Role of the Information Professionals in the Educational Process: The Case of the Sultanate of Oman

Prof. Naeema Jubr, Dr. Rahma Alkharousi

Department of Information Studies, College of Arts and Social Sciences, Muscat, Oman

Abstract: This research applied a mixed-approach to investigate professionals perceive on their profession and what others expect from them lead professional organizations to set the core competencies to improve the profession in the future. Furthermore, the research aimed to explore LRCs observes their educational preparation and job practices in building their profession. Besides, it defines the critical restrictions that

prohibit them from reimagining their future professional roles within the educational process. Questionnaires are used to explore Omani professionals acquired competencies from learning and work. In addition, the research conducted two discussion sessions with 10 focus groups to support the quantitative data collected through questionnaires. The quantitative findings indicated that a weak correlation between educational programs and work practices, especially in tasks requiring specialized skills and competencies. The qualitative findings highlighted the Competencies acquired by the information professional from work which are public relations, research skills, and partnership, marketing services skills, dealing with technology, and ways of dealing with the beneficiary. Besides, the findings revealed skills needed by the learning resource specialists as training in updating developments in the field, English language. Negative School staff's view information profession as multifunction of tasks that are not directly attributed to their occupation as well as far from the LRC regulations. the lack of communication between information professionals and supervisors, the absence of the learning resource specialists at schools in the first cycle of the basic education, the weakness of maintenance of hardware and Internet in schools, incorrect Job Title which is LRC Resource Specialist, are challenges hindered Omani professionals to make improvements in their profession. Accordingly, findings present suggestions to improve the actual status the Omani information professionals in schools like participation of the learning resource specialist in the field of developing the annual plan of the LRCs in Omani schools, allocate a special detailed budget and the Centers building should be checked to be suitable for the services provided at school.

Keywords: Omani information professionals, Omani schools, Information as a multidisciplinary field

Relationship of Business Students' Perceived Information Literacy Self-Efficacy with Personal and Academic Variables

Muhammad Asif Naveed¹ and Madiha Mahmood²

¹Department of Library and Information Sciences, University of Sargodha, Sargodha, Pakistan

²Information Services Department, Riphah International University, Islamabad, Pakistan

Abstract: Information literacy (IL) self-efficacy is an essential key to students' academic performance and lifelong learning in an increasingly complex information landscape. This research intends to investigate the relationship of business students perceived IL self-efficacy with personal and academic variables. The data were collected from 350 students, recruited through convenient sampling process, using a questionnaire containing Information Literacy Self-Efficacy Scale and sociodemographic and academic variables. Descriptive and inferential statistics were applied for data analysis. Results indicated that respondents had high self-efficacy for basic IL skills whereas they had low self-efficacy for advanced level IL skills. There were significant mean differences in respondents' self-efficacy scores based on age, program of study, stage of study, ICTs proficiency and English language proficiency. Conversely, there was no relationship of respondents' perceived IL self-efficacy with gender, social background, ICTs trainings received, and IL instructions received. The pragmatic insights generated in this research may be used as a guide for designing not only information retrieval systems, but also for the curriculum of information literacy instructions.

Keywords: self-efficacy, information literacy, business students, correlatives, Pakistan

Relevance of the Spatial Triad Theory in (re) Resigning and Planning of Library Spaces

Caroline Ilako¹, Dr. Joyce Bukirwa M., Prof. Elena Maceviciute

¹Law librarian, Head IDA section, Standing Committee Member IFLA Law Section, Committee Member-Uganda Law Libraries association, Uganda

Abstract: Henri Lefebvre's spatial triad of interconnected 'moments' in the production of space (1991), and applies it to library spaces. His conceptualization of space portrays it as a 'social product' and that human experiences are socially produced within the spaces that they occupy. He argues that space consists of three elements i.e. spatial practice (perceived space), representations of space (Conceived space) and representational spaces (Lived space). Perceived- conceived-lived spaces have a dialectical relationship with one another and therefore call for proper analysis by the library managers who are planning on new spaces or on remodelling the existing spaces. These three elements will be operationalized as representations of space (library space attributes) influences different spatial practices (user perception, preferences and behavior) and representational space (user experience, satisfaction and factors affecting use) within library spaces. They constitute the analytical basis for designing and planning spaces for all types of libraries. This article constitutes the theoretical position regarding the three spatial triad elements and their implications on library spaces.

Research and Publication Practices of Social Science Faculty: A Narrative Inquiry

William H. Weare, Jr.

Doctoral student, Gateway PhD Program, School of Information, San José State University and Queensland University of Technology (QUT)

Abstract: This paper provides an overview of a dissertation in which I am applying narrative inquiry to study the research practices of social science faculty at US universities classified as "Doctoral Universities – Very High Research Activity" (The Carnegie Classification of Institutions of Higher Education). The purpose of this exploratory study is to better understand the nature of the research and publication practices of social science faculty from the origin of their research problem through the dissemination of their findings. I plan to interview social science scholars about their research practice using an ethnographic approach in which participants are asked a "specific grand tour question" (Spradley, 1979, 2016). Each participant will be invited to tell the story of their most recent research project leading to publication. Findings from the study may have significant implications for academic libraries and librarians. Equipped with an improved understanding of the research and publication practices of social science research faculty, academic libraries and librarians will be better positioned to design and deliver more effective services, supply rich and appropriate access to needed materials, and shape the development of library facilities to better meet the needs of faculty.

Keywords: academic libraries, higher education, narrative inquiry, research practices, social science faculty

Research Data Management: A Review of UAE Academic Library Experience

Judith Mavodza

Zayed University, United Arab Emirates

Abstract: This paper is a review of the status of Research Data Management (RDM) efforts in UAE university libraries. Though not a new concept, findings indicate that RDM activities are in their infancy, but knowledge of the importance of research data exists. Reference to research data covers data from experiments or laboratories, generated from test models (climate, mathematical or economic models), derivations or compilations (text and data mining, databases, 3D models), collections of peer reviewed datasets published (chemical structures, gene sequence databanks, statistical datasets), and datasets from national censuses (very useful for demographic, occupational, and housing information to answer fundamental questions in social economic history). The reason for rising interest in research data management is due to its importance in making informed data-reliant decisions. The role of university libraries as some of the enablers of research is central data capture, management, and access by researchers. But then, this is not always a smooth activity as expressed in literature. Several reasons may stand in the way of sharing research data. Lack of access to it, for example, is a major challenge. This may be a result of data repository restrictions, not knowing of its existence, connectivity issues, and so on. The challenge leads to addressing data literacy matters that are cited by Elsayed & Saleh (2018). This is when potential beneficiaries of research data do not have the skills, e.g. data analysis capabilities, to derive meaningful information from the data. When there is no meaning derived from existing research data, it stands to reason that there may also be reluctance or inability to store it in retrievable spaces, because of not appreciating the point of doing so. Thus, the lack of clarity about the advantages of data sharing demands researcher guidance on RDM. Additionally, according to Elsayed & Saleh (2018), when university libraries are introducing research data plans in a multi-lingual environment (such as in the UAE), sometimes researchers need more clarification about and familiarization with meanings of terms, e.g. research data, data management plan, data documentation, data repository, digital archive, etc. Other obstacles to RDM efforts include compromised reliability of some research data, e.g. when original data sets are not stored, remaining with only the aggregated results from one data gathering exercise to the next, it becomes complicated to have longitudinal studies of patterns. Furthermore, coding may not always be consistent over prolonged periods of time, resulting in many inconsistencies. When there are spelling mistakes, name variants, and specific language preferences, data collection and use requires unified effort as poor and loosely connected data representation happens easily. With are no data capture and storage plans, no qualified staff to create and manage the projects, accompanied by difficulty in creating RDM specialist positions, there is lack of clarity about data capture, ownership, and sharing implications, e.g. data lifecycle, copyright, fair use, intellectual property.

Keywords: research data management, big data, repository

Research Libraries in Digital Culture

Olga L. Lavrik

Dr, State Public Scientific and Technological Library of the Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russian Federation

Abstract: Transition from print to digital culture has radically changed the way research libraries fulfill their role in information provision of scientific investigations, let alone library networks operating within one complex scientific organizational structure. To develop the perspective model of a new library networks operating within one complex scientific organizational structure – for it to become a relevant information and communication channel - general external and internal factors (information behavior of users of scientific information, modern tendencies and experience of research support by research and academic libraries, inner changes in science), were considered in detail. As far as Russia is concerned, specific factors connected with the reformation of the Russian academy of sciences were also treated. As an example, the author proposes a model of a new information and library network of the Siberian Branch of the Russian Academy of Sciences (SB RAS) which radically changes the old one. The library network of SB RAS was built at the times of printed culture as a three-level system (the central library of SB RAS - the State Public Scientific Technological Library of SB RAS (SPSTL SB RAS); the central libraries of SB RAS research centers; research institutes libraries). It became obsolete due to the radical changes in the system of scholarly communication. The proposed model includes the following parts: 1) reorganization of printed collections in all research institute libraries (digitization, move to the SPSTL SB RAS or to the central libraries of SB RAS research centers; forming union electronic catalogue and full-text data bases). It means that the central libraries become book archives, SPSTL SB RAS maintains full-text databases and the union electronic catalog; 2) advanced training of librarians in research institutes for them to acquire new skills to operate as embedded librarians on research support in cooperation with SPSTL SB RAS; 3) to develop forms and methods for research support. The list of possible services for research support is given. It has several groups: inclusion in research process and performing all information tasks, creation and maintaining special information systems, preparing (or participation in preparing) analytical information products, using and preparing bibliographic and scientometric information, promotion of resources and services of interest for scientists and specialists. Special attention is paid to the services on sources of information that traditionally were not treated by academic and research libraries and to great changes in reference service due to the changes in the content of users' requests. The stages of implementation of the proposed model are described in detail. All these should make the SB RAS library network a relevant information communication channel and to serve scientists and specialists from a research idea to its implementation in practice. For the users the main idea is as follows: the library and information system (its products and services) is being constantly developed under the impact of information communication technologies, but "old" forms of access to libraries are being preserved up to their full displacement (due to non-use) by the new ones.

Research Methods and Librarian Practice: The Experience of a Public Library in the State of São Paulo, Brazil

Luis Claudio Borges¹, Gilda Olinto²

¹Library Supervisor of the Biblioteca Municipal Macedo Soares and Doctoral student at the Graduate Program in Information Science of the Brazilian Institute for Information Science/Federal University of Rio de Janeiro, Brazil

²Professor at the Graduate Program in Information Science of the Brazilian Institute for Information Science/ Federal University of Rio de Janeiro, Brazil

Abstract: We consider here some different research methods applied in a Municipal Public Library located in the city of Jacareí (State of São Paulo, Brazil), in an effort to identify actual and potential users and promote community involvement in the library. At first, we briefly take into account the importance of a comprehensive and inclusive approach to library-community relations, involving a **social network perspective**. Then, we try to point out some specific research methods, which the librarian-researcher used as reference, or applied systematically, to dynamize the library. The library was created in 1908, has a collection of 50 thousand items, and has a portfolio of library services, as ICT courses and training, monitored visits for the municipal public schools, projects aiming at bringing library services to peripheral neighborhoods, as well as projects focusing on library use by institutions for youngsters in need. In 2018, when the library celebrated 100 years, it was selected to participate in a Program promoted by the NGO Recode and supported by the Bill&Melinda Gates Foundation. The research project was carried out in 2018, and was initiated by an effort of group sensibilization involving the public library managers and personnel, and key community figures, as school teachers. In the research meetings promoted, we sought to identify library users' profile and community characteristics, key institutions and leadership. The next step involved several visits by the librarian-researcher to the community institutions identified as key institutional actors. As a parallel initiative, we tried to use **Observation** as a research method. So, we observed the community streets and open spaces, as the *Patio dos Trilhos*, an ancient railway station, the most popular public space used by youngsters. This space congregated community initiatives as it is the case of the event called "The Battle of the trails". This event is promoted by a hip-hop group and, in the observation period, it was possible to identify, during this event: a collective group promoted by Black Girls, a LGBT group, and the production of communication materials as Fanzines, leaflets, etc. During these observations, annotated in observation sheets, it was also possible to identify that these events and initiatives were not well accepted by certain community groups. The observation experience and the visit to other community groups led us to promote the formation of a library collective, which absorbed some of these young people. This collective became involved in the next phase of the research project using **semi-structured interviews** to deepen information about key community institutions and leadership. The research participants were introduced to interview methodology and were involved in the collection and analysis of data, also conducted as a group activity. New actors and community institutions which could participate in the library activities were identified with data analyses of the interviews, using **content analysis**. Several themes and suggestions for library projects were proposed as a result of these data analyses. Arts and crafts, human's rights and citizenship building, work opportunities and entrepreneurship were proposed and were proposed for library projects.

Keywords: public library, community studies, library research methods, observation, interviews

Research on Development Strategy of China's Technology Transfer Based on SWOT-QSPM Model

Liu Yu^{1,2} Fang Shu^{1,2} Xu Wenjuan¹ Lu Ying^{1,2} Yang Zhiping^{1,2}

¹Chengdu Document and Information Center, Chinese Academy of Science, P. R. China

²Department of Library Information and Archives Management, School of Economics and Management, University of Chinese Academy of Sciences, P. R. China

Abstract:

Purpose/significance

This paper used SWOT-QSPM model to explore the most suitable development strategy for China's technology transfer. Then, it studied the priorities of the various implementation options in this strategy, and proposed countermeasures. It provided theoretical models for the future research development of China's technology transfer.

Method/process

This paper comprehensively investigated the four influencing factors of advantages, disadvantages, opportunities and threats of China's technology transfer development status. Furthermore, it used the SWOT model to deeply analyze the development environment, relationship and trend of China's technology transfer, and thus obtained the most suitable development strategy. Then QSPM matrix was used to determine the priority of the four alternative options for this strategy, and finally it formulated countermeasures for implementation.

Result/conclusion

The most suitable competitive strategy for China's technology transfer was in a good development situation in which advantages and opportunities occupied a dominant position. And the most suitable strategy for future development was the SO aggressive strategy. What's more, the four options were in order of priority, followed by policy guidance, demand orientation, integrate development and service escort.

Keywords: technology transfer, SWOT, QSPM, development strategy, alternative option

Researchers and Archival Institutions: Methods, Regulations and Policies in the Archival Research

Eleni Mamma

Archivist - Librarian, MSc, General State Archives (National Archives), Library and Reading Room Department, Greece

Abstract: The presented paper deals with the topic "Researchers and Archival Institutions: methods, regulations and policies in the archival research". The main purpose of the paper is, firstly, to present the basic concepts related to the archives, to show the keys and the ways of managing the whole circle of the archives' and documents' life as well as to prove how archival research is accomplished and how the view of the researchers towards this fact is being fulfilled. Furthermore, the significant and influential role of the Archivist (the guidance in the research and the level of skills and knowledge) is broadly being examined.

Finally, this paper presents the important ways of the archival research in the National Archives of Greece [General State Archives (GSA) of Greece] and the results of a questionnaire to specific target groups of researchers, who responded to answer matters

dealing with the access in the archival materials as well as the research being conducted in the Archival Institutions of Greece.

The main methodology being used in the paper is the bibliographic search in international databases, and especially in international journals and books, dealing with Archival Institutions, archives and archival research. Moreover, a wide bibliographic overview has been carried out. Last but not least, a closed type questionnaire of twenty multiple choice questions has been conducted, in order to point out how the researchers deal with the access to the material of the Archival Institutions in Greece, the regulations, the finding aids and the key role of the Archivist in their whole attempt to search the archival resources and locate the whole information needed for their research interests.

This paper concludes with some major proposals concerning, the possibilities and the dynamics of the improvement of regulations and methods in the archival research as well as the outstanding presence of laws and instructions which come to enable researchers and intensify the meaning of archival research in the appropriate direction.

Role of Social Media as Advertising Tool for Libraries: Evidence from COMSATS Library by using Technology Acceptance Model

Shahzad Abbas, Fakhar Abbas Hashmi, Hafiz Abdul Rehman

COMSATS University Islamabad, Pakistan

Abstract: The purpose of this paper is to analyze the importance of social media activities in advertising of universities libraries. The technological growth of web from web 1.0 to web 2.0, is more challenging for librarian that how they attract their users and market their resources and services. The most important part of web 2.0 is two way communications. As we know that the trends of online social networking have gained much attention than any other activities in current library users. It is customarily no secret that we live in a knowledge-driven society where humans use knows how strategically for more than a few purposes. Libraries are information providers and facilitators. Start from clay tablets to card catalogs and then move on to computerized catalogs, libraries have continually played a very important role in providing up to date information to its patrons. In an extension to this usual position, librarians have grown to be some of the earliest adopters of social networking technologies with a view to connect with their users. Although libraries have always deal people with information, social media is beginning to play an important role in advertising information to library users and in branding the library as a community hub. Findings of the study suggest that librarians and students are overwhelmingly aware of the “Facebook phenomenon.” Those who are most enthusiastic about the potential of online social networking suggested ideas for using Facebook to promote library services and events. Data will be collected form library users i.e. students, faculty, staff through online questionnaire about COMSATS library Facebook page.

Keywords: university libraries, social media, information services, advertising, information dissemination

The Role of Spanish Academic Libraries for the Digital Dissemination of Research

**Brenda Siso-Calvo¹, Rosario Arquero-Avilés², Gonzalo Marco-Cuenca³,
Silvia Cobo-Serrano⁴**

¹IdeaLab Research Group, Department of Library and Information Science, Complutense University of Madrid, Spain

²Head of IdeaLab Research Group, Department of Library and Information Science, Complutense University of Madrid, Spain

³IdeaLab Research Group, Department of Documentation and History of Science, University of Zaragoza, Spain

⁴IdeaLab Research Group, PhD in Library and Information Science, Spain

Abstract: The purpose of this research is to carry out a comparative analysis on the current state of digital dissemination and promotion of research in the Spanish University System, as well as to know the role of academic libraries in the management of this type of initiatives.

The main objectives are:

- To examine the research activity led by public universities through their institutional websites.
- To analyse the resources that universities use to allow the access to research information.
- To identify what resources and initiatives are managed by academic libraries.
- To know what strategies universities intend to develop in the near future.

In order to carry out the study, a series of indicators have been selected and defined in advance, followed by a systematic and standardised review and collection of data through the exploration of the 50 Spanish public universities websites. A content analysis of the strategic plans of the universities has also been carried out.

The main results show that catalogues of research groups are the most common choice to visualize and disseminate the research activity from a single access point.

In relation to the other indicators, there has been a considerable progress although there is still a long way to go in terms of the availability of resources specifically aimed at the dissemination and digital promotion of research.

Several initiatives have also been identified to determine the growing interest of the institutions in strengthening their strategies along these lines.

Lastly, academic libraries are a key element to facilitate access to research outputs: from the traditional institutional repositories to recent bibliometric units. However, efforts are needed to give visibility to library work.

Round Two, What's New? Comparing Two Phases of UX Research at the University of Toronto Scarborough Library

Sarah Guay¹ and Sue Reynolds²

¹Liaison Librarian, University of Toronto Scarborough, Canada

²Reference Technician, University of Toronto Scarborough, Canada

Abstract: User testing is a valuable method for measuring user habits and expectations, as well as identifying problematic areas for improvement within a website. This presentation will compare two phases of user experience research carried out on the University of Toronto Scarborough Library website using a mixture of qualitative and quantitative research methods. In particular, we discuss methods used for task-oriented

usability testing and card sorting procedures using pages from our website. Widely applicable results from this study include key findings and lessons learned in order to improve library websites.

Keywords: user experience research, UX research, user-centred design, usability testing, card sorting, academic libraries, library websites

Royal College of Nursing Regional Contacts Outreach Project

Phil Segall

Royal College of Nursing, London, UK

Abstract: Reaching out to users unable to physically visit the library is a challenge for most library services. The Royal College of Nursing (RCN) supports over 435,000 members in the United Kingdom. The geographical dispersion of these members means the vast majority cannot regularly visit any of the RCN's four libraries. Efforts to redress this in the past were sporadic and services were often criticised for being focused upon centralised resources. The RCN's Library and Archive Service (LAS) started a regional contacts project in 2016, with a commitment to developing staff and member relationships through activities across the UK.

Nine LAS staff were assigned a region in England. Named library contacts were also assigned a similar role in the other three countries (Northern Ireland, Scotland and Wales). 18,788 miles of travel were accrued by the team throughout the English regions alone in 2016 and the team in Scotland engaged with over 2000 people through their outreach activities. Events range from presentations and information skills sessions to topical quizzes at conferences and exhibiting a handling collection of nursing artefacts. Visits frequently involve liaison with library staff in universities and hospitals too.

There has been a dramatically expanded online offer during the same period. Regional contacts are able to highlight services available and explore collaborative opportunities. Challenges have presented themselves, however in terms of removing LAS staff from the core library functions and impact on staff workloads. Engaging external healthcare staff has also been easier in some regions than others.

This way of working is still new to LAS. This paper looks into what impact the regional contacts project has achieved and new methods of collaboration forged between LAS staff and other parties. This is done through a mixture of feedback gained during these outreach activities and analysis of service use by region.

Keywords: Royal College of Nursing, health information professionals, regional contacts, collaboration

Rural School Libraries Anchoring Community Mental Health Literacy

Denice Adkins¹, Beth Brendler¹, Melissa Maras² & Kerry Townsend³

¹School of Information Science & Learning Technologies, University of Missouri, Columbia, MO, USA

²Assessment Resource Center, University of Missouri, Columbia, MO, USA

³Columbia Public Schools, Columbia, MO, USA

Abstract: Across the United States, one in five children has or will have a serious mental illness. This project intended 1) to determine current efforts among rural school libraries and communities to promote mental health literacy, and 2) to determine rural school libraries' capacity to promote community health literacy. This project used a

mixed method design, including activities such as a quantitative survey of mental health support administered to rural school librarians, counselors, and administrators; qualitative interviews and focus groups with rural school librarians, counselors, and administrators; environmental analyses of school libraries where best practices are happening.

Keywords: mental health, school libraries, school librarians, rural areas, community support

Russian Academic Libraries within the Information/Learning Commons System: The Case from Peter the Great St. Petersburg Polytechnic University

Natalia Sokolova, Alexander Plemnek

Information Library Complex, Peter the Great St. Petersburg Polytechnic University, Russian Federation

Abstract: The Ministry of Research and Higher Education of Russian Federation develops requirements for an academic library of Russian university defining services which should be provided as well as special metrics for some of them. Beyond traditional figures for the print collections and library premises, the new ones cover e-resources access and university repositories development.

Since 2008 all university libraries should provide access to so-called electronic library system (ELS). This name refers to the e-library (repository) containing mostly educational resources, preferably electronic copies of the print textbooks. That demand initiated the growth of aggregators who joined documents from different publishing houses. The publishing houses of educational literature also began to establish their own ELS. In their turn, universities also start to create their own ELS. Contrary to EU experience of repository development, e-libraries of Russian universities store materials mostly for education than for research needs.

In accordance with the Federal Law “About Education in Russian Federation” № 273-FZ from 29.12.2012 each educational institution has to create “the electronic information educational space” or, in other words, start transition to the Information/Learning Commons model. Since 2015 all universities should provide access to e-copies of graduate works for bachelor, master and postgraduate degree. All graduate works should be places in university ELS.

The case of Information Library Complex of Peter the Great St. Petersburg Polytechnic University (SPbSPU) shows how the service-oriented integrated library system RUSLAN becomes the part of the Virtual Commons within the three-level Commons model, effectively communicating with other university services and creating new processes.

E-library of SPbSPU was created in 2000, by now there are 16 different flows for various kinds of the resource type and acquisition source. E-library stores more than 50 thousand resources. Each one is supplemented by the paper agreement with author(s) or another corresponding document. About 80% of resources are in open access. Since 2018 after transition to a new ILS platform, the new process of graduate works’ submission to the E-library was implemented. It follows special requirements of the Russian copyright legislation and also provides additional validations of input data.

Special information system controls compliance between demands of the disciplines for the literature and the library collection, both print and electronic.

The library portal supports several single search box interfaces via resources-specific index-based discovery services.

Participation in FEDURUS (FEDeration of Unified access to academic resources for RUSSia) provides Single Sign-On functionality both for access of SPbPU students and staff to external resources and for legal access of Internet users to the university repository and other resources.

Several MOOK courses developed by the Information library Complex help students and staff to use new information services and work effectively in e-space.

All together mentioned above activities creates the new Library for the new University.

Scaffolding Google: A Set of Training Cards

Rafael Ibarra

Applied linguist, General Directorate of Libraries, Universidad Nacional Autónoma de México, Mexico

Abstract: This paper shows the successful application of a cards game to collect appropriate outcomes from Google and/or Google Scholar. The didactic cards game represent an decisive didactic alternative for young researchers looking for information in either of the Google's services or similar search engines, including commercial information providers such as Elsevier, Proquest and EBSCO. The cards comprehend a series of: *purposes, verbs, direct objects, connectors, and instruments* that represent profitable utility in all varieties of libraries, almost any field of knowledge and language. Results are presented.

Keywords: Google Scholar, language, game, search engine, training cards, applied linguistics.

Scholarly Contributions of a Global Pharmaceutical Company Scientists: A Bibliometric Study

Dr. Anna Ching-Yu Wong

Senior Information Scientist, Library & Information Services, IQVIA: The Human Data Science Company, Overland Park, Kansas, USA

Abstract: Publication is a vital part for academia researchers to make contribution to their disciplines and communities; this form of transmission and disseminating scientific knowledge also plays an important part among scientists and analysts who serve in a business environment. Higher education administration frequently uses publication metrics to highlight faculty members' productivity and research impact. This paper argues that this widespread practice also can be used to measure and evaluate scientists and researchers who work at in a corporate environment acknowledging their contributions. This paper presents a bibliometric analysis of the publications that are produced by a group of clinical and pharmaceutical researchers and analysts which published in the most popularly life science database, PubMed database. This study aims to gain a greater understanding of the life science authors who are working for a global pharmaceutical company. These global researchers and scientists have made great contribution in illustrating and clarifying massive amounts of information in the fields of biomedicine for decades yet their contributions is commonly overlooked and have not received the same level of recognition as clinical and life science faculty. Data were collected from period between December 2017 to November 2018 which retrieved 429 research articles. Using bibliometric analysis method, the analysis focuses on research productivity and influence, which will be measured (but not limited) the

number of articles, authorship pattern and their origins, subject distribution of articles, impact factors, and forms of documents cited. The organization of this paper as follows: Background gives a brief overview of the pharmaceutical firm and its profiles of scientists; literature reviews on bibliometric analysis and its application; results and discussion; and the conclusion would summarize the results and provide implications for future research.

Keywords: bibliometric analysis, pharmaceutical research, clinical research, information dissemination, publication analysis, research productivity, research impact

The Scholars Profile of Indian Institute of Technology Madras a Case Study

Mahendra Jadhav¹, P. Kannan²

¹Librarian, Central Library, Indian Institute of Technology Madras, Chennai, India

²Deputy Librarian, Central University Punjab, Bhatinda, India

Abstract: Indian Institute of Technology Madras (IITM) <https://www.iitm.ac.in> is a one among the foremost institutes of national importance in higher technological education, basic and applied research in India. It has top-ranked by the National Institute of Research Framework, Government of India, since last three years. The Institute has sixteen academic departments, 590 faculties, and 9000+ students. The Scholars profile <http://iitm.irins.org> portal of IITM has developed by using “Indian Research Information Network System (IRINS)” is a web-based software as a service platform.

The objective of the project is to create a single point of access to the personal faculty details with Academic qualification and education, subject expertise, honours and awards, experience, research projects, the doctoral scholars guided and publications etc. It has integrated with the academic identity of the faculty such as ORCID ID, Scopus Author ID, Research ID, Microsoft Academic ID, and Google Scholar ID for ingesting the scholarly publication from various sources. The publications data fetched from Scopus with API integrations. It provides significant exposure and research contributions to the peer group as well as to the international community. The portal helps the research administrator to build research report, performance assessment and research impact analysis, received funding and ranking of the institute based on the various parameters. The portal key features are discovery search interface, filters, and imports publications from academic identities, visualisation network with co-author and subject experts, and a graphical representation of department productivity of the publications, the departmental h-index, and individual faculty h-index. The dashboard shows the Scholars strength, departments, and top ten authors by the publication count and top ten articles based on the citations received.

The Scholars profile of IIT Madras has more than 22K publications. The top three authors, as well as cited articles, are from Physics and Chemistry, and also both the departments are highest in h-index.

Keywords: academic identity, scholars profile, research information management, Indian Research Information Network System, digital repository

School Libraries and Makerspaces – A Metric Research

Deise Jesus, Ana Novo

Universidade Aberta, Portugal

Abstract: This paper is the result of research done for a master's degree at Universidade Aberta, Portugal (Master in Information Management and School Libraries) which focused on the use of makerspaces in school libraries. Its main objective was to identify, through a bibliometric analysis, the approach given in the scientific literature to makerspaces in school libraries. We started with a literature review on school libraries and makerspaces and found that these are potential spaces for school libraries as they stimulate creativity and serve as an aid to the teaching-learning process, providing extra-class support to the content transmitted by teachers in the classroom. The ability of these spaces to develop specific skills in students and bring the external community, including parents, into the school activities, further stimulating the development of both cognitive and social competencies on students was also noted. A bibliometric study on the topic was next performed. We used "Publish or Perish" software to retrieve 979 articles in English language and 108 articles in Portuguese and Spanish language: analyzed information about the main journals, articles, authors, dates, H index, G index and other metrics and did an altmetric study with the 50 most cited articles focusing on social and demographic data. The results obtained show that 25% of the main journals published 48% of the articles, while the other 75% of journals were responsible for 52% of the articles, validating, in this case, the Bradford Law (1934) for the topic. As for the main authors, the results were consistent with Lotka's Law (1926) but couldn't be confirmed with exactitude. Regarding the main articles, there was a certain preference among the readers for documents with a broader approach, contemplating a panoramic analysis on the theme of makerspaces, including both practical and theoretical views. The theoretical view stands out among the most cited articles. The temporal analysis indicated a growth in the number of documents published since 2011, when the first article was found in the literature. This growth was exponential from 2011 to 2014, when it became linear until the date delimited to carry out the research, July 2018. Considering other aspects, the theme presented an H index of 31; G index of 58; an average of 4.58 citations per document; an average of 1.63 authors per document. The altmetric analysis revealed it that there is no direct relation between the most cited articles in the scientific circles and the most cited articles in the social web. The social media which was most used to quote scientific articles on the topic was Twitter followed by Facebook. The country with most mentions was the USA, followed by the UK and Australia. We were also able to verify that in Portuguese and Spanish, in both the bibliometric and altmetric analysis, the number of articles, authors, citations and mentions was much lower than in English, the latter being the most active language on the subject, in scientific circles and in social networks.

Keywords: makerspace, school library, bibliometrics, altmetrics

School Libraries in National Minority Schools

Debora Radolović

Scuola Media Superiore Italiana Dante Alighieri, Pola, Croatia

Abstract: The world of education is changing, and changes affect all its components. Libraries operating in the education system see their role through a support of the education process they are tied to. By transforming their services, modern libraries meet the growing educational requirements while simultaneously taking on an increasingly significant place in the field of education. In the past, libraries have focused on their funds and their size as a measure of their own quality and importance. Today, given the needs and requirements of the contemporary environment, educational orientation is necessary for all libraries, especially libraries operating in the education system. This paper deals with the importance and impact of school libraries providing support to the education of pupils of national minorities' schools. The paper deals specifically with the school libraries of the Italian national minority operating within the educational system of the Republic of Croatia. The school library is considered as a place of learning and information, and a librarian as an associate in teaching, a partner in the communication of material content and cultural activities, and intercultural cooperation and minority promotion in the community where the school operates. The school-library profession in the educational environment is a relatively young profession, which is expected to utilize but also develop the potential offered by technology, orienting itself to the educational and information needs of students and teachers. As an associate in the classroom, the school librarian through his work with students and teachers ensures the relevance of the program by orienting toward the generic skills and knowledge of "how to learn" and how to access, find and evaluate and interpret information in order to turn it into knowledge. The aim of this paper is to show the activity of school libraries in Italian national minority schools and their importance for the creation of a sound intercultural cooperation and life in the majority community.

Approach/Methodology: Through the qualitative approach and an analysis of the operative programme of minority libraries, the paper shall show particular activities of libraries and their importance in the community in which they operate.

Results: It is expected that a systematic review of the operative programme shall give a clearer picture of the importance and role of the library and librarian in education.

Originality/Value: The paper fills a relative gap in the existing literature on national minority school libraries and their work.

Keywords: school library, education, national minority libraries, role of libraries

Search. Discover. Create. Building a Suite of Mobile Apps for Academic Libraries

**Valeda Dent¹, Kiichi Takeuchi², Ben Turner¹, Heather Ball¹, Caroline Fuchs¹,
Ann Jusino¹, Shilpa Karnik¹**

¹St. John's University, USA

²Long Island University, USA

Abstract: Librarians and staff at St. John's University Libraries created three mobile apps to support students' use of the Libraries' services and resources. Concept development, technical development, evaluation, UX implications, and financial considerations are presented for each mobile app.

Introduction

This presentation describes the creation, design, implementation, and assessment of a novel suite of academic library mobile apps at St. John's University Libraries. Two of three mobile apps were designed from scratch and created to meet specific user needs beyond just searching for information. Each app is currently available in both Apple and Google Play stores. The most interesting functional elements include the ability to search for books on the libraries' shelves using beacon-enabled technology; to check out books using a mobile device; and initiate and progress through the initial stages of the research paper process. Practical information related to concept development, technical development, evaluation and UX implications, and financial considerations will be presented.

Attendees might also be interested in learning how the apps might be deployed at their own libraries, in this way, this proposal meets the aims of the conference by providing practical and replicable information for the professional community.

Keywords: mobile library apps, beacon technology, information literacy standards, academic libraries

Secondary Data for Librarians: Benefits and Challenges

Ana Dubnjakovic

Head, Music Library, University of South Carolina, USA

Abstract: All data collected by someone other than the analyst are considered secondary data. Secondary data related to libraries are routinely collected by government agencies, corporations, institutions of higher learning and individuals. This presentation will discuss the many benefits of using secondary data including costs, scope, availability and data quality as well as challenges such as lack of documentation, questionable provenance and others.

Current uses of secondary data in libraries will be discussed through examination of published research in library literature. Furthermore, examples of uses of secondary data to gain new insights and inform library practice will be provided. Finally, specific sources of secondary data worldwide will be shared.

Keywords: secondary data

Showcasing Relevance by Measuring Scholarly Impact of Research at the Personal or Departmental Level

Lutishoor Salisbury

Distinguished Professor / Librarian, University of Arkansas Libraries, USA

Abstract: In this session, participants will gain a familiarity of the various scholarly and altmetric indicators that will be useful to assist faculty and researchers in showcasing their value. During the session, higher level practical examples will be demonstrated using a researcher's articles, the journal in which he/she has published, as well as, relevant databases to produce a portfolio of evidenced-based metrics. The information presented will be useful for a faculty, department, college or an organization, as well as, for those researchers who are applying for immigration status, and tenure or promotion. It will also be useful to compare the productivity of departments with peer or aspiring institutions. Gaining this knowledge will help information professions to offer services to their clientele beyond the traditional ones.

Socioeconomic Status and Self Concept Development of Students with Visual Impairment in Punjab

Dr. Sajida Mah Jabeen ¹, Dr. Humera Mah Jabeen ²

¹Department of special Education University of the Punjab, Pakistan

²Librarian, Govt Post Graduate College for Women, Sub Campus University of Gujrat, Satellite Town, Rawalpindi, Province Punjab, Pakistan

Abstract: The study has evaluated the impact of socioeconomic factors on the self concept development of the students with visual impairment in Punjab. 165 students (98 male and 67 female) were chosen from the randomly selected schools of the students with visual impairment in Punjab. The descriptive survey method was used for data collection and a modified self-description questionnaire used by Jayne E. Stake (1992) was used to evaluate the self concept of the students with visual impairment. The study found that economic status of father had significant impact on the self-concept of the students with visual impairment. Students with better economic status showed better self-concept and vice versa. On the other hand there was no significant difference in the total self-concept of the students with visual impairment on the basis of mother education and occupation.

Keywords: self concept, visual impairment

Social Impact of Libraries. Let's Nurture the Language - How Public Libraries Can Play the Vital Role in Language Campaign

Jasmina Ninkov

Director, Belgrade City Library, Serbia

Abstract: In the paper and presentation it will be presenting how public library can have a vital role in national language compagne. The Belgrade City Library is one of the partners in the design, implementation and promotion of the campaign "Let's Save and nurture the Serbian Language" which deals with the care and protection of the Serbian language and script, as well as the promotion of general linguistic culture and literacy. The campaign "Lets nurture the Serbian language", which started in 2015. in Belgrade, the capital city of Serbia extended to the republic level in October 2016. The libraries in main cities join to Belgrade City Library and were the hosts of the promotion, which included various cultural, artistic and educational programs inspired by the preservation of the Serbian language and script:

An exhibition of posters and photographs of celebrities who supported the cultivation of the Serbian language;

Workshops for children and youth organized by the Library of the City of Belgrade;

Meetings with contemporary writers, scene programs in cooperation with local educational and cultural institutions; free professional accredited seminars for teachers of Serbian language and literature organized by the Society for Serbian Language and Literature.

Within the campaign, in order to raise the level of awareness about the importance of fostering proper speech and writing, educational posters with photographs of famous

public figures and appropriate language lessons were drawn, drawing attention to frequent language mistakes and affirming the exact answers to numerous lingering doubts. The language confusions displayed on posters were created by associates from the Faculty of Philology in Belgrade. The exhibition of posters and photographs "Let's care about the Serbian language" had the opportunity to see the inhabitants of all cities where the campaign was promoted during the first half of 2017. The fact that the approach to learning language rules through writing short, witty dialogues for students was interesting and refreshing, it was an initial capsule that the action "Let's care for the Serbian language" is similarly closer to children and young people. Librarians from Belgrade City Library have designed and promoted workshops for pupils of elementary and secondary school age during promotional activities. In the workshop work, the action "Let's not speak the Serbian language" was featured through the presentation of video clips and posters in which celebrities point to frequent spelling mistakes. Then, through conversation about linguistic culture, frequent linguistic confusion and mistakes that the students themselves notice, the need to nurture and preserve the mother tongue, numerous languages in the world that disappear, and other interesting topics from linguistics. In the further course of the workshop, the students engaged in creative writing, and in group work they created short, witty dialogues about language encyclopedias and confusing issues characteristic of their city and environment. In the end, the participants were photographed with a book in their hand. As the final product of the workshop, posters with photographs of pupils and clarifications of certain language dilemmas were made through short stories and dialogues, and the visual identity of the poster is the same as for posters with "stars" from public life.

Keywords: social impact of libraries, public libraries, language compagne

Springer Nature and iversity

Francesca Bonadei

Executive Editor, Academic MOOCs, Springer Nature, Italy

Abstract: As a global publishing company, Springer Nature publishes high-quality, innovative products in science, humanities, technical and medical areas. Lecturers at universities, scientists and professional experts publish at Springer. Even if Springer Nature is a publishing house and not a university, we offer products in distance education and online learning as well. We cover a full spectrum from our full-fledged bachelor and masters distance programs, short certificate courses across various disciplines to short micro-learning online courses. The latest addition to our offerings in the education space is our online learning platform iversity.org. It became a part of Springer Nature in October 2017, with the aim of providing easy, asynchronous online learning for professionals and students and getting course achievements recognized. The platform develops high-quality online courses in collaboration with academics experts, institutions and corporate experts, and delivers these courses via the platform, distributing them to individual and corporate customers. Our courses, like our books and journals, have the Springer Nature stamp of quality since we work in close cooperation with top class instructors, higher education institutions and knowledge-based companies making our learning content engaging, interactive thereby making learning fun.

Statistics on the Directory of Open Access Books

Keita Tsuji

Faculty of Library, Information and Media Science, University of Tsukuba, Japan

Abstract: The bibliographic information of open access (OA) books available through the Directory of Open Access Books (DOAB) was investigated. The chronological changes in the number of titles and the distribution of subjects, languages, publishers, publication/add-on years, licensing patterns, etc., were clarified. The sample comprised 13,253 OA books, which were available through the DOAB as of December 31, 2018. The results showed that OA books were increasing at an accelerating rate, although the speed at 2018 slightly decreased. As for the distribution of subjects, Science (“Q”), Social Sciences (“H”), and Political Science (“J”) were the most popular. With regard to languages, English, French, German, Portuguese, and Spanish were the most common. As for the publishers, Frontiers Media SA, De Gruyter, MDPI, Presses universitaires de Rennes, and ANU Press were the most popular. As for the licensing patterns, “CC by-nc-nd” and “CC by” were the most popular. Considering these tendencies, libraries should begin to utilize OA books by, for instance, providing them as part of their collections.

The Status of Electronic Theses and Dissertations (ETDs) Outputs among Institutional Repositories in South African Universities

Thembeni Malapela and Zanele C. Hadebe

University of Cape Town, Library and Information Studies Centre, South Africa

University of Zululand Library, KwaZulu-Natal, South Africa

Abstract: Electronic Thesis and Dissertations (ETD) repositories have been around for more than a decade now and were initiated as a means of collecting, sharing, disseminating, and archiving research outputs from academic institutions. Even before ETDs, institutions of higher learning had been collecting and archiving this type of scholarly output. While most theses remain unpublished, the knowledge produced is almost constant as it is a requirement for students and/or researchers to submit a thesis/dissertation on graduation. In sub-Saharan Africa, it has been established that there is a low research output when compared to the rest of the world, despite the fact that there are many universities in Africa who produce ETDs and other scholarly material. The purpose of this study was to establish the research output and visibility of scholarly research produced by higher education institutions in South Africa with a specific focus on ETDs. The study focused on scooping the state of affairs; establishing the visibility of the South African ETDs and gaining a better understanding of issues that arise with the archiving of ETDs in institutions of higher learning in South Africa. This study has both quantitative and qualitative aspects, and employs pre-dominantly the survey methodology. Two major methods are employed in this study- a desk study where each respective repository was examined for scholarly research contents, the type of contents, the technical aspects of the repository (software, metadata standards, OAI PMH compliant, indexing of contents, deposit policies, copyright policies and institutional OA policies, etc.). The Web Ranking of Repositories will be used to study the international visibility rates of each repository under study. In this desk study, each ETD visibility was checked in the Directory of Open Access Repository (DOAR); the ROARMAP and the Webometrics as a measurement of visibility. The second method

was an online questionnaire which was sent to the respective repository managers to get an insight into various issues surrounding the archiving of ETDs in South African Universities.

Keywords: Electronic Thesis and Dissertations (ETDs), Open Access, repositories, visibility, scholarly research outputs, Open Access archiving

Storytelling about the Italian Public Libraries. Considerations about Method and Emerging Research Patterns

Chiara Faggiolani¹ - Anna Galluzzi²

¹Sapienza Università di Roma, Dipartimento di Lettere e Culture Moderne, Italy

²Biblioteca del Senato "Giovanni Spadolini", Roma, Italy

Abstract: The transition from the so-called Evidence-based Librarianship (EBL) to the Narrative-based Librarianship (NBL) - in line with the "narrative turn" occurred in the social sciences and humanities - is taking places in Italy too. Here the narrative methods have been re-interpreted in a specific way, thanks to the increasing of field surveys that make use of them.

The paper presents the methods and the first results of a meta-research that starts from a *corpus* encompassing the textual data produced by means of qualitative research techniques in the Italian public libraries. Applying a software for automatic text analysis (IRaMuTeQ), the authors analyse the lexicon behind the narratives of users, non-users, opinion leaders and staff members and chase various cognitive aims according to both an inductive and a deductive approach. The result is a map of questions and answers that help defining emerging research patterns and developing further considerations about the chosen methodological approach.

Keywords: Narrative-based Librarianship, public libraries, automatic text analysis

The Study of Readability of Bibliographical Styles in Digital Environment Using Eye-tracking

Adam Szalach

Institute of Information Science and book studies, Nicolaus Copernicus University, Poland

Abstract: The article aims to present the findings of pilot research on readability and legibility the 4 most popular bibliographic styles in student management systems. Current analysis is performed by use the basic system for study and students management in Poland - USOS, which is also implemented at the *Nicolaus Copernicus University*.

The goal of presented research is to examine how the students while search for the relevant positions in specified bibliographic list.. Due to this study it is possible to point the most intuitive bibliographic description from the perspective of information architecture at all. Moreover, the researches can help improve the readability and aesthetic of bibliography published on the integrated services to support educational processes and used for students and scholars management.

The research being discussed, was performed by use infrared, 60Hz, mobile eye-tracker. The experimental group consisted of the information architecture students. In order to achieve the sustainable degree of complexity of different bibliographical styles, apart from using eye-tracker, the experiment also encompassed the questionnaire with detailed questions concerning the elements of bibliographic description. In the

experiment the following styles were used: Vancouver Style, the Traditional Polish according to (PN-ISO 690: 2002 and PN ISO 690 2), combination of mentioned and based on network resources.

Keywords: eyetracking, bibliography, readability, legibility

A Study of the Cultural Intelligence of Special Libraries: Phase 1

Michele A. L. Villagran¹

¹Assistant Professor, San José State University School of Information, USA

Abstract: In this article, research is presented from phase one exploration of the cultural intelligence (CQ) of special librarians including international information professionals. This research was inspired by three focused questions: (a) What is the overall level of CQ of participating special librarians?, (b) What variations exist among the four factors of cultural intelligence within the participants, and (c) What are the viewpoints of these librarians about the importance and value of cultural intelligence within their organizations? Special librarians' cultural intelligence has not been formerly studied (with the exception of United States law firm librarians, a specific type of special librarian). A concurrent strategy was used in this mixed-methods study. A survey that included the cultural intelligence assessment, demographic questions, and open-ended items was disseminated to members of the Special Libraries Association (SLA). Of 148 initial respondents, 51 provided complete survey responses. The data was collected and analyzed resulting in two main conclusions: (a) special librarians feel cultural intelligence is important to their organizations and roles, and (b) participants have various levels of CQ within each factor. The findings support recommendations to incorporate CQ training within organizational practices and to make CQ a priority as our practices are global. Phase 2 of focus groups of participants that opted-in will take place after this publication and offer additional rich insight into thoughts about cultural intelligence practices and application within organizations.

Keywords: cultural intelligence, cultural competency, special libraries, special librarians, information professionals, international special librarians

Supporting Social Innovations in Libraries in the Czech Republic: A Case Study of CIDES project

Ladislava Zbiejczuk Suchá, Eliška Bartošová, Roman Novotný, Eva Víchová

Division of Library and Information Studies, Faculty of Art, Masaryk University, Czech Republic

Abstract: The Czech Republic is the country with the highest library network density in the world. There are more than 5000 libraries, representing one library for every 1,971 Czech citizens. In many places, libraries serve as a natural center of community activities. That is why the Department of Information Studies and Librarianship, with the support of the Ministry of Labor and Social Affairs, launched a project aimed at supporting libraries as catalysts for social innovation.

In the first phase of the project we conducted a interview-based qualitative research, which gave rise to the typology of socio-innovative projects as well as the profile of a librarians as a social innovators, including mapping of motivations and barriers to the introduction of social innovation in libraries. In the second part of the project, we

launched two activities to promote innovation with a high social impact: an incubator of social innovation and an accelerator of social innovation for libraries.

The Social Innovation Incubator is a two-month program for librarians, during which teams from individual libraries go through a design process. We use a tailored HCD (human-centred design) methodology for libraries - Libdesign. This methodology is based on a sequence of research, analysis, design and testing phases. An important part of the process are iterations and continuous improvement. An Accelerator of Social Innovations is a form of support for specific library projects with a high social impact. The accelerator methodology is based on HCD again plus participative community mapping methodology. We provide project teams with free mentoring, link libraries with relevant experts and eventually sponsors.

The project has been going on for two years and the last year is ahead. It is still too early to evaluate the impact of the whole project, but within two years we have already gathered a lot of data on how librarians in the Czech Republic are approaching social innovation. This data allows us to understand librarians as social innovators – their motivations, beliefs, dreams, but also worries and barriers. The conference contribution will present the most important findings from our investigation.

Keywords: social innovations, libraries, human-centred design, design thinking

Suppression of Scholarly Journals: A Case Study of the Journal Citation Reports during 2010 to 2014

Mohammadamin Erfanmanesh

Department of Library and Information Science, University of Malaya, Malaysia

Abstract: Journals indexed by the Clarivate Analytics are suppressed from the Journal Citation Reports if they manipulate their impact factor and present extreme outliers in citation behavior through excessive self-citations and citation stacking with other journals. The current research aims to investigate the characteristics of suppressed journals in a five-year time span (2010-2014). This study is an applied research which is conducted using bibliometrics approach. Research population comprised of 225 suppressed journals from the Journal Citation Reports during 2010-2014. Data was collected from the Journal Citation Reports and Web of Science. Results of the study revealed that journals from 177 subject categories were suppressed during 2010 to 2014. The highest number of title suppressions was belonging to electronics and electrical engineering, management and artificial intelligence. Investigating the share of world countries showed that the United States, United Kingdom and the Netherlands had the greatest number of suppressed journals. Findings revealed that 41.3% and 38.2% of the journals were suppressed for one and two years, respectively. Moreover, 65% of the suppressed journals were ranked in the first and second quartiles of their respective subject categories a year before suppression. Awareness of researchers and journals' editorial board members as well as regular monitoring of the journals' citation performance may avoid occurrence of suppressions in the future.

Keywords: journal suppression, Journal Citation Reports, self-citation, citation stacking

Systemizing Factors Influencing Scholars Open Access Publishing Behavior: Theory of Planned Behavior Approach

Fausta Kepaliene

PhD, Vilnius University Faculty of Communication, Lithuania

Abstract: The results of research on open access (OA) use show that both scholars and society benefit from OA. However, the development of it highly depends on the publishing behavior of the scholars – decisions they make where to publish their research results. The problem can be expressed by a question: what factors and in what way determine the OA publishing behavior of the scholars?

A lot of research has been made recently in order to find out the factors that influence scholars decision where to submit manuscripts of scholarly work – to subscribed or open access journals and if to deposit their research papers into repositories. It was found out that such factors as the amount of knowledge that scholars have about OA publishing, their attitude to it, perceived benefits and obstacles of OA as a scholarly publishing channel, as well as the previous experience of using OA, are the main determinants. However, most of the research lacks a theoretical and systemic approach to this complex issue.

Theory of Planned Behavior (abbreviated TPB) that was developed from Theory of Reasoned Action proposed by Martin Fishbein and Icek Ajzen in 1980 comes in handy to link and systemize the factors that influence scholars OA publishing behavior. There already have been several studies that used TPB theory to investigate the OA publishing behavior of scholars (Lars Moksness, Svein Ottar Olsen; Ji-Hong Park) whose TPB construct is based on the link between attitude, subjective norm, perceived behavioral control, intention, and behavior. TPB not only helps to find out the core determinants that influence scholars to use OA but also to evaluate what is the level of control that the scholar possesses while making a decision where to publish his / her research results (do in certain circumstances scholar have an opportunity to choose publishing channel?), as well as the pressure that is coming from the external environment (what does the scholar think – do his authorities think that he / she should publish his / her work to OA?).

The goal of the presentation is to analyze the different factors that influence the scholars OA publishing behavior in a systematic way – using the theoretical framework of Theory of Planned Behavior.

Keywords: open access, scholarly publishing, publishing behavior, Theory of Planned Behavior

Systematic Reviews: Fast Track to Service Delivery

T. Derek Halling¹, Margaret Foster², Susan Goodwin³

¹Director of Evans Subject Librarians, Texas A&M University Libraries, USA

²Systematic Reviews and Research Services Coordinator, Texas A&M University Libraries, USA

³Associate Dean of User Services, Texas A&M University Libraries, USA

Abstract: Providing support for systematic reviews has become a highly desired service deliverable for academic libraries. Part of this increased demand is due to a recognition in the value of systematic reviews across multiple disciplines. In 2018, Texas A&M University Libraries launched a unique fast-track training program for liaison librarians to increase capacity for systematic review protocols, outreach, and

support while also leveraging specific subject expertise. The innovative program introduces library liaisons from across the disciplines to this unique methodology through hands-on, real-world, researcher experiences, as they work in tandem with the Medical Sciences Library's Systematic Review Librarian. The challenges were two-fold: 1) How do we increase capacity for offering this unique service beyond the medical sciences library with limited resources for additional positions, and 2) How do we provide practical training on a short-timeline when a typical systematic review can take up to a year or more to complete? This session will provide initial findings from an assessment of survey results completed by the subject liaison participants, along with an overview of how the training sessions were set up, lessons learned, and next steps in preparing librarians and the library for delivery of this 21st century service demand.

Taking Risks - Moving from the Traditional while Partnering for Student Success

Ellen Safley

Dean of Libraries, Eugene McDermott Library University of Texas at Dallas, USA

Abstract: In a concerted effort to move beyond the basic, McDermott Library is creating an atmosphere to test experimental services and promote partnerships involving a variety of different initiatives. The initiatives include the implementation of smart rooms that enables student groups to maximize technology and share their creations, the creation of virtual reality laboratories for graduate students in computer science, the redesign of physical spaces to provide new furniture and systems, and the licensing and marketing of a learning environment outside the curriculum using the Linked-In Learning Library. The library maximizes all digital formats and provides 24-hour chat services as well as a variety of instructional opportunities for students. The usage of all initiatives is analyzed to evaluate success. The redirection of the library vision is changing how students interact with librarians and staff.

Teaching Information Competences in a Digital World for Future Professionals: Strategies and Methodologies to Support Research Librarians as Trainers in Scientific and Technical Information

Ornella Russo

Consiglio Nazionale delle Ricerche Biblioteca Area Ricerca Bologna, Italian National Research Council, Library of Bologna Research Area, Italy

Abstract: Future professions and the labor market will require nowadays-young people the ability to constantly update themselves and learn specific high-profile skills throughout their life. Informative and digital competence is closely connected to lifelong learning and to the potential of each person to be able to participate actively and critically in the current knowledge society. Being competent in the research, evaluation, management and communication of information is in fact to know how to constantly update, to be able to make informed decisions, to know how to evaluate the effectiveness of a new idea and to know how to produce new knowledge; it is a fundamental competence supporting lifelong learning, innovation and creativity, increasingly at the centre of European agenda and of the labor market.

This contribution presents the experience of the Bologna CNR Research Area Library in relation to the design and realization of a digital and information literacy course within an ITS course addressed to future energy experts and BIM managers. ITS (Istituto Tecnico Superiore - Higher Technical Institute) are the two-year educational tertiary segment, out of University, aiming at offering to participants the possibility to achieve specialized training, according to the needs of the enterprises and the labour market. ITS aim at valorising the technical, professional, scientific culture, in order to offer concrete answers to the needs of the economic systems.

The course is structured as a 20-hour basic course and addressed to second year students of the ITS "Territorio Energia Costruire" of Ferrara. Aim of the course is to train students about technical scientific information and enhance their research and evaluation skills in order to face the project work foreseen by the ITS didactic plan for the second year within the architectural design discipline.

The contribution illustrates and reflects on the methodologies and qualitative strategies adopted in the various phases of the course - planning, implementation, evaluation, dissemination - highlighting the key elements of the pilot experience, a prototype that can subsequently be exported to other ITS paths existing in the Emilia-Romagna region and in Italy. This pilot experience has been carried out as activity of the LLL European project "CARONTE Continuing education and scientific information literacy on Raw Materials for professionals" funded by EIT Raw Materials and aimed at training future professionals in the field of circular economy and raw materials. The design of the course was shared with managers and subject teachers of the ITS, aiming at a comprehensive improvement of the training path.

The course has been designed taking into account a constructivist approach teaching methodology and a problem based learning methodology, characterized by strong interactivity and active involvement of the participants, who faced the need to solve a problem-situation in a real context. The proposed activities have been aimed at favouring both the theoretical and conceptual dimension of learning, and the technical-practical dimension related to the skills necessary for informational competence, but also the meta-reflexive dimension and acquisition of self-awareness with respect to the cognitive processes involved in the process of discovery and search for information and documental research.

The learning evaluation has been carried out using mainly formative evaluation tools: an evaluation section of the project group-work, a self-assessment tool and a questionnaire of satisfaction.

The contribution presents contents and achieved results, and outlines future developments of the experience reflecting about the role that research libraries and scientific information professionals can play towards the creation of technical-scientific expertise for the 21st Century new professions.

Teaching Music Bibliography and Information Literacy: A New Challenge for Italian Music Librarians

Carmela Bongiovanni

'Paganini' Conservatory of Music, Genoa, Italy

Abstract: In this report, I consider the impact of a new way of musical research in the small world of Italian conservatories. Until a few years ago, not many conservatories

activated a course in music bibliography. The dissemination of courses led to a new series of reflections on how the discipline could be taught. In practice, even if not consciously, the introduction to musical research, implied in the bibliography of music objectives, has been transformed in 'information literacy'. Indeed the aim of Italian bibliography of music courses is to provide a first basic knowledge on Internet or paper music resources, and furthermore how to recognize and choose Urtext and critical music editions etc. Teaching how to evaluate the best digital or print musical editions is one of the priorities of our discipline, together with the choice of the best resources for a qualitative research in music.

Today more than ever, bibliography of music, as a global musicological discipline, makes use of free or commercial digital or digitalized resources on the web. These resources improve and broaden means for those looking for music and writings on music. Undoubtedly, music knowledge benefited in this context, even though today few scholars critically explored the teaching methods in music bibliography: mainly how to select new concepts and hypertexts, and the paths of research particularly (but not only) for musicians, the range of music knowledge is involved in the general information literacy education.

In this paper, after a first examination of international bibliographical repertoires facing the challenge of globalization, I will try to answer the question about the best music data selection strategies, and teaching methodologies of music bibliography that helps student's music research path, keeping in mind that within enormity of access you can get lost.

Theoretical and Practical Approaches on International Exchange of Publications. Study of Case: Lucian Blaga Central University Library of Cluj-Napoca, Romania

Bogătean Alina Ioana, Lucian Blaga

Central University Library, International Exchange Office, Cluj-Napoca, Romania

Abstract: In spite of the new challenges due to the changes in social, economic, digital and political environments, the section of international exchange of our library remains an essential way to contribute to the collection development. In the first part, we focus on theoretical approaches of the service regarding a short history of the service, the assessment of it in order to respond to the needs of the academic communities served by the library. In the second part, we'll treat the practical aspects caused by the digitization of the publications, open access, higher shipping charges etc.

Keywords: exchanges policies, open access publications, exchange vendors/partners, computerized exchange, statistics, electronic resources

"Those Who Cannot Remember the Past are Condemned to Repeat it": Create Criteria for Documenting Experiences in Libraries and National Archives as Organizational Memory

Narges Neshat

National Library of Iran, Iran

Abstract: National libraries and archives have gained experience and knowledge over the years with a variety of activities that are valuable and can help them in the future to do better organizational processes. This knowledge, known as "organizational

knowledge", results from conducting research projects or various executive activities, dealing with new professional issues or initiatives, and innovations designed to accelerate a workflow. This knowledge is one of the main assets of any organization and requires management. A great deal of this knowledge is in the minds of the employees, which can be forgotten by going old employees and hiring new employees. In such a situation, documenting experiences as a key factor for more and more of them as organizational knowledge is important. But where do we begin? What are the basic criteria for collecting, organizing and documenting experiences in libraries and national archives as organizational memory?

Keywords: national libraries and archives, criteria, knowledge management, documenting experiences

A Three-phased Investigation in “Reference Librarians” in Academic Libraries in Republic of Moldova

Ane Landoy¹, Natalia Cheradi², Angela Repanovici³, Silvia Ghinculova²

¹University of Bergen Library, Norway

²Academy of Economic Studies, Chisinau, Republic of Moldova

³Transilvania University of Brasov, Romania

Abstract: Through the project “Modernization of academic library services in Moldova” which includes all 18 academic libraries in the country, service quality is enhanced through different activities and with different foci during the project period (2016-2019). In summer 2018, the project arranged a summer school for the library directors, discussing “Reference librarians” in the context of academic library service enhancement. In the summer school, there were discussions about definitions of “reference librarian”, and examples of job descriptions and recruitment strategies. After the summer school, a survey was sent to the library leaders, and there were document studies to determine the usage of reference librarians.

Through this three-phased set of investigation, the use of “reference librarians” in academic libraries in Republic of Moldova was mapped, and suggestions for better use of them was collected to be fed back to the community of library leaders. In the paper, the authors will show the methodology used in the three phases of investigation, and how they together contribute to a fuller picture of the actual situation.

Keywords: reference librarians, Moldova

Towards a Fair Approach to Scholarly Publishing: The KU Leuven Fund for Fair Open Access

Laura Mesotten, Demmy Verbeke

KU Leuven Libraries, Belgium

Abstract: For many years now, opposition against a commercial approach to scholarly publishing has been growing stronger and stronger. The for-profit model leads to publications which are prohibitively expensive, either for the reader or for the researcher, and typically puts commercial partners in control of the dissemination of scholarly work since researchers have to transfer critical aspects of their author’s rights in order to get published. Alternatives such as Green Open Access (whereby researchers make an archival copy of their publication freely available to all), in most fields, do not

challenge the traditional commercial publication model enough. Therefore, another alternative is on the rise, namely Fair Open Access. Publications in Fair OA are immediately freely available to all, are produced according to cost-effective (rather than commercial) principles and guarantee full control of researchers over the entire publication process.

KU Leuven has been supporting Green OA through its institutional repository Lirias for many years already. As it is clear, however, that Green OA provides some but certainly not all of the solutions, the university was looking to intensify its efforts to maximize scholarly exchange, collaboration and innovation. This resulted in the establishment of the KU Leuven Fund for Fair Open Access in March 2018. The fund provides financial support for the production costs of OA monographs published by Leuven University Press as well as articles in selected OA journals, on the condition that these journals are published according to the Fair OA model and maintain the highest academic standards. Moreover, as of 2019, the fund has broadened its support to various non-profit OA initiatives and, this way, contributes to the development of sustainable OA infrastructure and advocacy activities.

This paper analyses current business models for OA, explains the reasoning behind the establishment of the KU Leuven Fund for Fair Open Access, discusses its day-to-day operation and presents its results after one year of operation.

Transformation in University Libraries for Agricultural SMEs in Uganda: Harnessing Emerging Research and Innovation Information Opportunities

Robert Stalone Buwule¹, Stephen Mutula²

¹Kyambogo University, Uganda

²Prof., University of Kwazulu Natal, South Africa

Abstract: If Small and Medium Enterprises (SMEs) in the Agricultural sector are to remain competitive in the market, they have to keep innovating, making their presence very visible and responding pro-actively to the demands of their customers. This approach may however not be possible without the support of a reliable sources of Research and Innovation (R&I) information. R&I information Services for SMEs most especially those in the Agricultural sector is very expedient since Agriculture is the backbone of Uganda and many other sub Saharan African economies. This study investigates the need for institutional transformation in the access and utilisation of R&I information that is largely generated in universities and collected and stored in university libraries. The study used an exploratory research design and employed questionnaire and interview methods when collecting data.

This paper reports on the SMEs' R&I information needs, information types available, information sources, the role R&I information plays in SMEs business decision making, the qualities of R&I information the SMEs need, the SMEs utilisation of R&I information, adoption of innovations emanating from R&I information and sustenance of these innovations from R&I information. The paper concludes by demonstrating the SMEs willingness to access R&I information from public and private universities in Uganda and the need for Institutional transformation of university libraries to serve SMEs with this information.

Keywords: university libraries, research and innovation information, institutional repositories, SMEs, Uganda

Understanding the Impact of an Institutional Repository – A Big Data Mining and Visualization Project

Nicole Kong¹, Nina Collins²

¹Associate Professor & GIS Specialist, Purdue University Libraries, USA

²Scholarly Publishing Specialist, Purdue University Libraries, USA

Abstract: Purdue University e-Pubs is the scholarly publications component of Purdue Institutional Digital Repositories. It is the component for journal articles, technical reports, and similar works of a scholarly nature produced at or associated within University. Purdue e-Pubs is an open access service, which furthers the engagement mission of the University by providing a platform from which the global community can benefit from the scholarly output of Purdue University. In order to understand the impact of e-Pubs for the global community, readership data has been collected and analyze in this study to demonstrate the spatial and temporal readership pattern around the world.

Purdue e-Pubs is a *Digital Commons* project, which provides some access to track the article download information. These information include which article was downloaded, at what time, and by which institution. The data were collected from 2014 fall to 2018 including more than 2 millions of downloading records from over 100,000 academic or commercial institutions, government agencies, and military organizations. Due to the file size limitation, the raw data were collected in multiple files. It's original format was poorly organized for visualization.

In this project, we have designed a relational database to store the data in different categories, including the receiving institution's information, article information, and the downloading pairs. Then, several Python scripts were developed Python scripts to transform and combine the raw data, so that they could be imported into the database. For visualization purpose, we adopted an open-source web based platform named Superset, which provides different big data visualization functions with various database connection options.

The initial visualization results have shown that the majority readers for Purdue e-Pubs are from educational or commercial institutions distributed worldwide. USA readers count for more than 80% of the records, followed by India, Great Britain, Brazil, Germany, and some of the neighboring European countries. Time series analysis shows that the readers are increasing every year with a consistent downloading pattern – articles were downloaded more in spring and fall semesters, but less during summer. Weekly analysis shows that there are more readers during weekdays but less in the weekends. Article content analysis shows that educational institutions usually download more diverse topics, while commercial institutions are more focused on articles in specific topic, such as a certain technology.

Keywords: institutional repository, big data, visualization, assessment

Use of Libraries at Sultan Qaboos University of Social Media Features in Providing Information Services

Ms. Khalsa AL-Barashdi

Sultan Qaboos University

Abstract: Nowadays, Social media became a reality by influencing all aspects of our daily life.

Therefore, Social media is considered as the fastest tool to disseminate information. Thus, academic libraries found themselves facing a serious challenge in serving their users and marketing their services.

Therefore, academic libraries should use web 2 applications in order to benefit from the advantages they offer. Libraries in developed countries as well as in some Arab countries have already achieved this. Libraries of Sultan Qaboos University (SQU) have been striving to improve their information services through the use of ICT. This study investigated the use of social media by the Main Library, the Medical library, and the Information Center at the College of Economics and Political Science at SQU in offering information services to their users. Specifically, the present research studied the challenges faced by these libraries in this area from the viewpoint of their staff.

The main results of the study are:

- The above libraries have been using social media to serve their users and communicate with them.
- Such departments as the circulation department are offering their services through social media.
- The Main Library is ahead of other SQU Libraries in making use of social media through the use of Facebook, twitter, instgram and YouTube.

Keywords: social media, information services, academic libraries, Sultan Qaboos University, Oman

The Use of New Technologies in Contemporary Information Services

C. Floriselda Cuesta Rodríguez¹, José Carlos Sánchez Bernabé²

¹Dr., Titular teacher, Director of Technical Scientific Information Direction, Camagüey University, Cuba

²Instructor teacher, Information Sciences, University of Camagüey, Cuba

Abstract: The Directorate of Technical Scientific Information (DICT) of the University of Camagüey "Ignacio Agramonte Lloynaz" is oriented towards the generation of services that vary depending on the type of users. It has specialized rooms and a vast collection in support of teaching. The library promotes the study of its undergraduate, masters and doctoral students. Its objective is to satisfy the informative needs of the university community, establishing as a fundamental goal the continuous improvement in the quality of its services and information products. As a tool to achieve an efficient diffusion of its services, the DICT makes use of online repositories such as the ABCD Catalog v.3.0 that facilitates access to information. It continues to develop strategies that allow access to repositories as a way to expand information, promote their services and increase academic culture. Its mission is focused on increasing the production of services by keeping updated on the use of new technologies. Its vision is to become a reference center within the framework of the country's university libraries.

Methodology. An assessment was made by the computer engineers of the DICT, who, together with the management of the center, detected the difficulties that were opposed to the achievement of the goals set, such as the lack of visibility of the Online Catalog ABCD v.3.0 in the local network of the university, lack of training of technicians and room specialists and the limited knowledge of its users to carry out the search in the system.

The policies developed jointly by the directors of the DICT have radically solved most of these difficulties.

Approach and scope. It continues to advocate for the excellence of its services, using the Reference Catalog as a tool, since it allows the digitalization of traditional catalogs and the control of existing documents; It offers the possibility that both students and teachers consult our catalogs connected to the network from anywhere.

Incorporation of the use and management of the same, to the curricula of the Information Sciences career.

Achieve greater visibility of the repository.

Creation of courses and trainings.

Conclusions. As a result of the methodological application of the work it was possible to confirm that the use of the online catalog ABCD v.3.0 makes the quick consultation processes feasible. The implementation of the system broadens the professional horizons of our future graduates and satisfies the needs of an improved service in the internal processes of the DICT.

A solution was given to the problems detected for the use of new technologies based on the study and preparation of our students.

Keywords: online catalogs, information services, new technologies, libraries, digital repositories

Using Academic Libraries to Promote Research Data Management Practices among Faculty at the Kwame Nkrumah University of Science and Technology (KNUST), Kumasi-Ghana

Richard Bruce Lamptey¹ and Samuel Kotei Nikoi²

¹College of Science Librarian, KNUST, Kumasi, Ghana

²University Librarian, KNUST, Kumasi, Ghana

Abstract: Recent changes to requirements for research data management by academic journals and funding institutions and agencies have resulted in the emergence of institutional support for these requirements. At KNUST, the university library sought to formalize assessment of research data management practices of researchers at the institution by launching a faculty survey and conducting a number of interviews with researchers. An online survey was submitted to faculty and research staff on research data management practices to academics in the university including questions about data production, storage, documentation, management, and sharing practices. The survey was coupled with in-depth interviews with faculty. Survey and interview results suggest low level of awareness of the regulatory environment around research data management. Results also present a clear picture of the types and quantities of data being produced at KNUST. Researchers identified a number of services that they would find valuable including assistance with data management planning and backup/storage services. Results suggest that researchers have confidence in the university library to assistance with their research data. It is believed that the survey results will offer significant guidance for building a suite of services for the institution.

Using Quantitative Analysis to Explore the Journal Collection Needs for Researchers of New Developing Field: A Case Study of Printed Electronics Field

Ming Wu^{1,2}

¹National Science Library, Chinese Academy of Sciences, P.R. China

²Department of library, information and archives management, School of economics and management, University of Chinese Academy of Sciences, Beijing, P.R. China

Abstract: Printed electronics is a new developing field of which is based on principle of printed electronics manufacturing technology. Chinese Academy of Sciences (CAS) established Printable Electronics Engineering Center (PEEC) focused on research of printed electronics science and technology in 2015. National Science Library (NSL) of CAS has the responsibility to provide scientific and technical literatures and supported new developing field research.

Quantitative analysis is a very important and practical tool to examine how a library is meeting the needs of users and make decisions of collection management, especially for new developing research field. In this case study, the publication articles in printed electronics field were retrieved in Science Citation Index Expanded (SCI-Expanded) range from 2016 to 2018. Only articles, review and letters were include in this study and all articles were screened by fields' researchers to removed noise. After total source articles were yielded and considered to be representative data sets of source articles. Full record and cited references of data sets were to download as plain text and imported into Thomson Data Analyzer. Discover system of NSL was used to determine publisher of journals and library holdings.

The analysis results showed that 1083 publication articles published in 289 journals and 43384 cited references published in 4599 cited journals were analyzed. A core list of 26 source journals and 38 cited journals were obtained. The articles of printed electronics field were distributed in 66 Web of Science categories. The age of cited articles in printed electronics field ranged from 0 to 128 years. 40% the cited references were cited in nearly five years. Core lists of 23 source journals were published by 9 publishers and were available online. A core list of 36 cited journals were published by 10 publishers and were available online. Totally there were still 5 journals which were not available online and need to obtain by document delivery. The publishers of source and cited journals and library holdings were determined.

Based these quantitative analysis results, some information are not only useful to examine the most needs of printed electronics field, but also can be beneficial to librarians to make decisions for future evidence-based journal collection development in printed electronics field

Keywords: quantitative analysis, journal collection, new developing field, a case study

Using Smart Phones to Enhance HIV Prevention Knowledge among Village Doctors in Developing Regions: A Study in Guangxi, China

Yao Zhang¹, Shan Qiao², Xiaoming Li², Zhiyong Shen³, Weigui Guo³

¹School of Information, Kent State University, USA

²Arnold School of Public Health, University of South Carolina, USA

³Guangxi Center for Disease Prevention and Control, P.R. China

Abstract: In 2017, it was estimated that 747,000 people are living with HIV (PLHIV) in China [1]. Guangxi was one of the top HIV epidemic regions in China with a significant number of HIV patients living in rural areas, where the infrastructure is poor and the healthcare system is underdeveloped [2]. Village doctors, who are usually farmers receiving minimal medical and paramedical training in short terms without professional certificates [3], are considered to be the front line for HIV care and prevention for rural residents. Therefore, the quality of the primary HIV care and

prevention heavily relies on the village doctors' knowledge of HIV prevention. Studies showed that information communication technology (ICT) is used by both healthcare professionals and informal caregivers to gather the latest research and clinical findings for knowledge updates [4-5]. Multiple library-based intervention programs have been initiated to bridge the knowledge gap on HIV in less developed countries [6-8]. Little research has been documented, however, on integrating ICT in library services to support village doctors in HIV prevention knowledge seeking. Therefore, the purpose of this study is to examine the effects of using smart phones to promote the HIV prevention knowledge among the village doctors.

Cross-sectional data were collected from 228 village doctors using a questionnaire in Guangxi. Demographic characteristics and smart phone utilization are self-reported. The HIV prevention knowledge level was assessed using a scale of eight items ($\alpha=0.7$), a composite score was calculated by summing item responses (0-8), higher scores indicating better knowledge. We use independent T-test, one-way ANOVA, and bivariate correlations to investigate the relationship between smart phone utilization and HIV prevention knowledge of the participants. Among the participants, 80.3% were male, 32% received college or higher education, and 74.4% had a monthly income below 3,000 RMB (≈ 434 USD). The average age of the participants was 46.21 ± 9.48 , the average HIV prevention knowledge score was 5.54 ± 1.84 . Although 79.6% of the participants owned a smart phone, only 66.2% had used the online features. Participants who had accessed the Internet via their smart phones reported better HIV prevention knowledge than the group who did not. The level of HIV prevention knowledge was positively associated with website browsing and online searching, but no significant relationship was observed between HIV prevention knowledge and social networking or online entertainment.

The results of the study indicate there is an urgent need to improve the HIV prevention knowledge level among the village doctors in China. The positive association between accessing the Internet and HIV prevention knowledge highlights the importance of integrating smart phones in information services for the village doctors who work in less developed areas or resource-constrained settings. The findings also suggest that libraries should be prepared to fulfill the potential need for delivering training programs to the village doctors in order to increase their awareness of online resources, strengthen their searching capability, and encourage online communication.

Acknowledgments

This study was supported by Guangxi CDC and Beihai Municipal Commission of HIV/AIDS Control and Prevention.

References

1. Xinhua. China reports "nearly zero" HIV cases through blood transfusion. In: Liangyu, ed. Xinhuanet, 2017.
2. Li C, His JH, Xinghua W, et al. Disparities in HIV and syphilis prevalence and risk factors between older male clients with and without steady sex partners in southwestern rural China. *BMC Infectious Diseases* 2017;**17**:1-7 doi: 10.1186/s12879-017-2367-z[published Online First: Epub Date].
3. Hu D, Zhu W, Fu Y, et al. Development of village doctors in China: financial compensation and health system support. *International journal for equity in health* 2017;**16**(1):9
4. Fox S, Brenner J. Family caregivers online. Washington, DC: Pew Internet & American Life Project 2012
5. Bennett NL, Casebeer LL, Kristofco RE, Strasser SM. Physicians' Internet information-seeking behaviors. *Journal of Continuing Education in the Health Professions* 2004;**24**(1):31-38
6. Ajuwon GA, Komolafe-Opadeji HO, Ikhizama B. Librarian-Initiated HIV/AIDS Prevention Intervention Program Outcome in Rural Communities in Oyo State, Nigeri. *International Quarterly of Community Health Education* 2014;**34**(4):367-90 doi: 10.2190/IQ.34.4.F[published Online First: Epub Date].
7. Shabi IN. Knowledge and Attitude of Women to HIV/AIDS in a Farming Community in Southwestern Nigeria: Challenges for Public Libraries. *Public Library Quarterly* 2012;**31**(3):246-55 doi: 10.1080/01616846.2012.684631[published Online First: Epub Date].
8. Nassimbeni M, Shabangu J. Aspirations and contradictions. *Information Development* 2015;**31**(1):83-88 doi: 10.1177/0266666913511091[published Online First: Epub Date].

Utilization of Library Resources by Academic Staff Members of Institute of Agricultural Research and Training (IAR&T) Ibadan, Nigeria

Pius Olatunji Olajojo¹, Esther C. Ogedengbe² and Adeola F. Folasade³

¹Department of Library, Archival and Information Studies (LARIS), Faculty of Education, University of Ibadan, Ibadan, Nigeria

²Federal College of Animal Health & Production Technology (FCAH/PT) Library, Moor Plantation, Ibadan, Nigeria

³Federal School of Surveying, Oyo Town, Nigeria

Abstract: This study examined the utilization of library resources by academic staff members of Institute of Agricultural Research and Training (IAR&T). The objectives of the study are to determine the type of library resources available and why academic staff members do not use library resources as expected. It also examined the challenges faced by academic staff members when using library resources and of course frequency of use of these library resources was captured. A descriptive survey method was used for the study. The population of this study consists of 250 academic staff of the Institute. From the total population of the study, 5% was used for the sample and sampling technique allows five departments to be selected at random. Two hundred and fifty copies of the questionnaire were administered to academic staff members in all the five departments. The major findings of the study revealed that the most consulted library resources are journals, dictionaries, magazines, newspapers, and encyclopedias. The reasons for consultation vary from research purpose to preparation of lecture notes. The identified challenges are: poor ventilation, poor lighting and non-involvement of academic staff members in book selection. Results were presented using frequency counts, simple percentage, table, mean and standard deviation. The study recommended that the library should be properly ventilated and there should be involvement of academic staff members in book selection which will form part of library committee.

Keywords: utilization, library resources, academic staff members, agricultural research institute and training

Visualizing the Scholarly Impact of Medical Education Researchers

William H. Mischo, Mary C. Schlembach, and Elisandro Cabada

Carle Illinois College of Medicine, USA

Abstract: The Carle Illinois College of Medicine is a new professional school with an engineering-focused approach to the medical education of Physician Innovators. Over 200 faculty representing diverse disciplines from across the Illinois campus were identified to provide instruction, curricular support, and mentorship for student-driven research. Representing academic departments in STEM, medicine, health and life sciences, this trans-disciplinary approach to medical education creates unique opportunities for innovation. While processes to review the academic performance of students are continually being iterated upon, another aspect of assessing the research efficacy of a college is to track the scholarly impact of affiliated faculty. Librarian information professionals embedded in Academic Libraries have long developed expertise in the understanding, use and application of research metrics. This information has typically been provided in narrative form, non-interactive graphs, or has required a significant understanding of specialized visualization tools (such as Tableau), which may also incur licensing fees.

The Grainger Engineering Library Information Center at the University of Illinois at Urbana-Champaign has developed a new visualization web tool to display and disseminate data on scholarly impact of faculty in the new medical school. This tool requires no additional software for use or access, displays information in interactive form, and provides meaningful connections between data points. By harvesting bibliographic metadata through the Scopus API, the NIH and NSF websites, college administrators are able to visualize the publications, collaborations, citation metrics, and funded projects of their faculty. Harvested metadata is stored in a Microsoft Access relational database in separate tables. Bibliographic data and metrics including author name, list of publications within a specific date range, h-index, cited by count, number of co-authors and list of funded grants, and patents is then transcribed into a combined table. Utilizing HTML5 and Scalable Vector Graphics (SVG), a web-based program displays each data element of the combined table with a clickable link to expanded results for each author. With a focus on engineering, technology, and innovation in the new medical school, granted patents of affiliated faculty and students are tracked to assess the entrepreneurial impact of the curricula. By tracking scholarly impact, universities are provided with metrics to help set the direction of curricular development, recruit high performing faculty and students, and make strategic budgeting decisions.

What is Plagiarism? Do Academic Teachers and Librarians Agree?: An Investigation to Shape a Basis for Discussion to Promote Concerted Efforts in Helping Students to Better Academic Practice at One Swedish University

Britt Omstedt

Linköping University Library, Sweden

Abstract: Many studies (e.g. Hult & Hult 2003, McCabe 2005, Babic 2005, Amsberry 2009, Bohlin & Widén 2016) have been carried out on students and academic teachers' views on plagiarism. A common conclusion is that teachers and students have different opinions on what constitutes plagiarism as well as on the seriousness of the act. University librarians also play a part in the antiplagiarism work of universities through their teaching and lecturing on referencing and academic writing and by providing different kinds of guides and tutorials. There are fewer studies around their views, but librarians also seem to be divided (see e.g. Bartlett & Casselden 2011, Gibson & Chester-Fangman 2011, Schäfer & Trevisiol 2016) in how to act, some wanting to be neutral and not judging in their contacts with students. Many articles with a library/librarian focus are case studies describing the roles of librarians in different anti-plagiarism projects. But what are the librarians' views on plagiarism and do they differ from faculty's? In our study librarians take a stricter view than is presented in earlier research. This study was carried out in the hopes of being able to encourage further discussions between librarians and faculty and other stakeholders at Linköping University (LiU) on how we together can support students' introduction to good academic practice and awareness of academic integrity. Based partly on an earlier LiU-report (Hult & Hult 2003) a web-based survey was constructed to investigate librarians and faculty's views on plagiarism and how it can be prevented and detected. 64 members of faculty from the four faculties of LiU of Campus Norrköping Linköping University and 24 university librarians answered the 12 questions of the survey. Our results showed that librarians at Linköping university had a stricter and more unanimous view on what constitutes plagiarism. However more teachers than in the earlier Hult & Hult (2003) survey expressed a firm view in the present study. On the question how, plagiarism could be prevented the two staff categories agree that information is the best way but only a few persons made suggestions specifying how. Only a small part (11,3%) of faculty members and half of the librarians suggested directing students towards the anti-plagiarism guides and web sites that the university library provides. When it comes to discovering plagiarism the larger part of both groups shows awareness of the antiplagiarism software (Urkund) subscribed to by the university and chiefly teachers also suggest other measures. The study indicates that lack of common guide lines and a pronounced policy and different views among librarians and faculty could be an obstacle in both groups efforts to support students in anti-plagiarism work. It also makes it clear that the library has a way to go in promoting its guides and support services. Performing this study has given the university library a good incentive and background material for taking up discussions with faculty and other stakeholders, such as department heads, Disciplinary board and Academic writing support.

References

- Amsberry, D. (2009). Deconstructing Plagiarism: International Students and Textual Borrowing Practices. *The Reference Librarian*, 51(1), pp. 31–44. <https://doi.org/10.1080/02763870903362183>
- Babic, S. (2005). *Plagiering inom högre studier*. Gävle: Högskolan.
- Bohlin, M. C. & Widén, S. E. (2016). *University teacher and student judgments on misleading behaviour in study situations*. Trollhättan: Högskolan Väst.

- Carroll, J. & Zetterling, C.-M. (2009). *Guiding students away from plagiarism*. Stockholm: KTH.
- Ercegovac, Z. & Richardson, J. V. (2004). Academic Dishonesty, Plagiarism Included, in the Digital Age: a Literature Review. *College & Research Libraries*, 65, pp.301–318. <https://doi.org/10.5860/crl.65.4.301>
- George, S., Costigan, A. & O'Hara, M. (2013). Placing the Library at the Heart of Plagiarism Prevention: The University of Bradford Experience. *New Review of Academic Librarianship*, 19(2), pp. 141–160. <https://doi.org/10.1080/13614533.2013.800756>
- Gibson, N. S., Chester-Fangman, C. (2011). The librarian's role in combating plagiarism. *Reference Services Review*, 39(1), pp.132–150. <http://dx.doi.org/10.1108/00907321111108169>
- Gunnarsson, J., Kulesza, W. J., & Pettersson, A. (2014). *Teaching International Students How to Avoid Plagiarism: Librarians and Faculty in Collaboration*. *The Journal of Academic Librarianship*, 40(3-4), pp. 413-17. <https://doi.org/10.1016/j.acalib.2014.04.006>
- Hahn, C. (2016). Statistik: Disciplinära åtgärder. LiU student: Linköpings universitet. <https://www.student.liu.se/studenttjanster/lagar-regler-rattigheter/disciplinarenden/statistik?l=sv> [2018-05-08]
- Hult, Å & Hult, H. (2003). *Att fuskas och plagiera: ett sätt att leva eller ett sätt att överleva?* (CUL-rapport nr 6). Centrum för undervisning och lärande. Linköping: Universitetet.
- Kyrk, P. (2002). *Sammanställning av beslut från disciplinnämnder och domar i disciplinären från förvaltningsdomstolar 2001*. Stockholm: Högscoleverket.
- Kyrk, P. (2015). *Disciplinären 2014 vid universitet och högskolor*. Stockholm: Universitetskanslers-ämbetet.
- Lampert, L. D. (2004). Integrating discipline-based anti-plagiarism instruction into the information literacy curriculum. *Reference Services Review*, 32(4), pp. 347–355. <https://doi.org/10.1108/00907320410569699>
- Lyngfelt, A., Benjaminsson, S., Henning, K. & Sundin, L. (2009). Konsten att få "praktiska insikter i vetenskapligt tänkande": en studie om lärarutbildningens examensarbeten. In A. Hansson, B. Lyngfelt (Ed.), *Pedagogiskt arbete i teori och praktik: om bibliotekens roll för studenters och doktoranders lärande 2009* Lund: BTJ Förlag. (pp. 195–218).
- McCabe, D. L. (2005). Cheating among college and university students: a North American perspective. *International Journal for Educational Integrity*, 1(1). <https://www.ojs.unisa.edu.au/index.php/IJEI/article/view/14> [2017-01-24]
- Nilsson, L-E, Lönn Svensson, A & Orlenius, K., 2009. *Plagiat - en pedagogisk utmaning: rapport för NSHU-projekt startade 2007*, Kristianstad.
- Park, C. (2003). In other (people's) words: plagiarism by university students - literature and lessons. *Assessment & Evaluation in Higher Education*, 28(5) pp. 471-488. <https://doi.org/10.1080/0260293032000120352>
- Rosell, M. (2016). NoPlagiat helps students to avoid plagiarism and copyright issues. In ICERI 2016 Proceedings of the 9th annual International Conference of Education, Research and Innovation. Sevilla, Spanien. 14 - 16 Nov. 2016. pp. 7390-7397. <https://library.iated.org/view/ROSELL2016NOP>
- Spring, H., & Adams, R. (2013). Combating plagiarism: the role of the health librarian. *Health Information & Libraries Journal*, 30(4), pp. 337–342. <https://doi.org/10.1111/hir.12043>

What Makes a Data Librarian?: An Analysis of Job Announcements and Job Descriptions for Data Librarian

John Christopherson L.T. Fredeluces¹, Roselle S. Maestro², Marian Ramos-Eclevia², Carlos L. Eclevia Jr.³

¹University of the Philippines Diliman, Quezon City, Philippines

²De La Salle University, Manila, Philippines

³Emerald Publishing, Manila, Philippines

Abstract:

Purpose/objectives. This study examines the qualifications, skills, duties, and responsibilities of data librarians or data services librarians in academic libraries to clearly define the profession of data librarianship. Specifically, this paper would like to address the following research questions: (1) What are the competencies and responsibilities of data librarians and other associated positions to research data management in academic libraries?; (2) Which existing or new positions or areas of academic library services are related to data librarianship in general?; and, (3) What are the qualifications and training requirements for the data librarian positions

Significance of the study. Results of this study will provide useful information for librarians seeking for positions and library managers who wish to hire data librarians as well as for LIS school administrators who desire to produce LIS graduates with the necessary skills to provide data services.

Design, methodology, approach. This study uses content analysis approach for data collection and data analysis. In LIS, content analysis of job announcements is widely used to examine the hiring trends in the profession and analyze the job postings and job descriptions. Various online sources were used to collect job openings and job descriptions of data librarians and other positions related to research data management in libraries. Keywords such as “data librarian”, “data services librarian”, “data services”, “research data”, “data manager”, “data analyst”, “data analytics librarian”, “data management librarian”, “librarian”, and “job descriptions” were used in searching for job ads and job descriptions. Job postings and job descriptions were evaluated and coded based on the following categories: technology skills, professional involvement, evaluation and assessment skills, personal attributes, teaching skills, and education. Data were divided into several fields, such as job titles, job categories, geographic locations, types of libraries, job status, required qualifications and experience, duties and responsibilities, and salary level. Furthermore, this paper collected questionnaires to survey selected academic libraries in Metro Manila to determine librarians’ duties and assignments that are associated to data services. Questionnaires were distributed to chief librarians, directors, or university librarians of member institutions of the South Manila Educational Consortium and Consortium of Engineering Libraries in the Philippines. Respondents were asked to identify the duties and assignments of librarians relating to data management. Data were organized, analyzed and presented using frequency count, percentages, and statement descriptions.

Findings. The findings of this study are quite interesting as it presents an increasing demand for data librarian positions in many libraries abroad. However, data librarian is not an emerging position in selected Philippine academic libraries. Higher education institutions in the country have not realized the roles of libraries in managing and disseminating research data produced by their students and faculty. Librarians with research data services responsibilities are commonly known as data librarians. Findings reveal that most data librarian positions are of academic status. Majority of job announcements require at least two-year work experience on research data management.

Research limitations and implication (if applicable). This paper is limited to five years because many of the job advertisements from previous years are difficult to retrieve. Job postings with no description were excluded in this study. Only job openings and job descriptions for librarian positions in academic libraries with duties and assignments related to data services that are published online were considered in this paper.

Keywords: data librarian, data services, job announcements, job descriptions

What Makes a Great Leader? A Bibliometric Analysis of Leadership Theory and Practice in LIS Literature

Teresa S. Welsh

Ph.D., Professor and Director, School of Library & Information Science, University of Southern Mississippi, USA

Abstract: This bibliometric study examines scholarly LIS literature related to library leadership theory and practice including publication pattern, core journals, types of libraries, types of research, types of theory and leadership best practices identified in the articles. The study was limited to scholarly feature articles published in peer-reviewed LIS journals from 2008-2018. Of the articles that met the study criteria, ten focused on library leadership and theory and thirty-one focused on library leadership

practice, with six articles that focused on both. While publication trend over time is flat for the leadership theory articles, articles that focused on leadership practices indicated a pattern of growth over time in the number of articles published per year from 2008 to 2018.

Nine of the ten articles (90%) on library leadership theory focused on academic libraries and one on general libraries that included academic. While the leadership practice articles focused on a range of libraries (academic, special public, school, libraries in general, or LIS education), the majority (51.6%) focused on academic libraries. Of the leadership theory articles, survey research was the most common methodology (40%), and the most common types of theory were Action/Action Learning Theory, Behavioral/Cognitive Theory, and Complexity/Systems Theory. Library leadership competencies identified include creativity, flexibility and resiliency, ethics and trustworthiness, one who is highly motivated and able to motivate others, open-minded to new ideas, who strives for excellence, is self-reflective and an active listener. Best practices for library leaders include leadership training, mentorship/professional development of staff, staff cross-training, performance measures, effective communication, and transparency.

What Makes Filipino Librarians Happy? Exploring Workplace Happiness of Young and Aging Librarians

Marian Ramos-Eclevia¹, Rizalyn V. Janio², Rhea Rowena U. Apolinario³ and Carlos L. Eclevia Jr. ⁴,

¹De La Salle University, ^{2,3}University of the Philippines Diliman, Philippines,

⁴Emerald Publishing, Manila, Philippines

Abstract. This study aims to explore the factors affecting the happiness and job satisfaction of Filipino librarians. Information on physical, social and mental well-being, happiness and job satisfaction of young and aging Filipino librarians from private and public institutions was collected through adopted survey questionnaires distributed through email, social media and manual distribution from November 2016 to June 2017. A total of 237 usable questionnaires were collected. This study uses multiple regression analysis to examine the effects of gender, age, work experience, social support, time balance, working relationships, and career opportunity on the happiness and job satisfaction of young and aging Filipino librarians. A follow-up focus group discussion among librarians was conducted to understand factors influencing their happiness and satisfaction level. The findings of this study can be useful for providing a better understanding of happiness and job satisfaction among Filipino librarians to develop programs and practices for the young and aging workforce in the library setting.

Young People's Conceptions and Practices of Digital Safety: An Approach to Measurement

Dr. Ross J. Todd

Associate Professor, Department of Library and Information Science,
Director, Center for International Scholarship in School Libraries (CISSL), School of Communication & Information, Rutgers, The State University of New Jersey, USA

Abstract: As part of scholarly traditions centering on information and digital literacy, an emerging discourse and arena of research and service development is centering on the concept of digital wellbeing. Digital wellbeing is defined as the capacity of

individuals to look after personal health, safety, relationships and work-life balance in digital settings. While there is a plethora of small-scale research studies involving school students in terms of digital competencies, digital literacy, information literacy, and digital citizenship, much of this work focuses on information handling skills development and the attainment of educational standards around a range of pre-determined digital skills, as well as the development of sets of instructional interventions to foster the development of these standards. There is now a growing body of scholarship that is giving attention to conceptions and practices of digital safety by young people, an increasingly “hot topic” in educational arenas. This focus is mostly driven by concerned adults – educational leaders and parent organizations and puts emphasis on challenges such as cyberbullying, stranger danger awareness, sexting, and identity protection, but often without deep knowledge of the conceptions and practices of the school students themselves. At the same time, there is criticism of the efficacy of school-based interventions that seek to develop digital practices in relation to digital safety. For example, in a content analysis of youth internet safety programs in 2014, the Crimes Against Children Research Center posed the question “are effective prevention strategies being used? It found in its review that internet safety education is not incorporating proven educational strategies, and not founded on a strong understanding of how young people participate in digital social media, nor an understanding of practices they engage in to ensure their digital safety. Some preliminary work undertaken by the author in 2016 and 2017 suggests that young people, while seemingly technically savvy and a working knowledge of the digital environment, their predominant conception of being unsafe online centers on aspects of access, technical structures, potential for technical harm. “Unsafe” was predominantly seen as a system problem, not as personal-social-interaction problem. The initial findings showed limited acknowledgement of role of self in the safety equation. The planned QQML presentation will center on my current research on young people’s conceptions and practices of digital safety, which includes aspects such as acting safely and responsibly in digital environments, using personal digital data for protection of self and identity, preserving privacy, managing learning workload and distractions, managing and fostering positive relationships and meaningful interactions, and acting with concern for the human and natural environment when using digital tools, and participating safely in digital social networks. It will also present a measurement tool for school educators (such as school librarians and class room teachers) to gather data on conceptions and practices, and as a data foundation for the design of meaningful interventions. Guiding questions will be: what do students think it means to be safe online; what are the practices they engage in to be safe online; what do school librarians think it means to be safe online, and what are their practices surrounding digital safety; and how, if at all, school librarians develop safe digital practices through instruction in library classes. As part of this endeavor, I am planning to develop, test and implement a reliable measurement instrument to measure conceptions and practices of digital safety. This measurement instrument will be presented to the QQML community for critique and feedback.

Keywords: digital safety, digital wellbeing, digital literacy, information practices

YouTube Videos Produced by U.S. Public Libraries: Analysing Popularity and Factors that Increase Views

Yuhiro Mizunuma¹, Kazuki Sato¹, Fumiaki Miyazaki¹, and Keita Tsuji²

¹Faculty of Media and Information Resources, Surugadai University, Japan

²Faculty of Library, Information and Media Science, University of Tsukuba, Japan

Abstract: Public libraries are increasingly posting content on social media platforms such as Facebook, Twitter, and YouTube. In this paper, we focus on YouTube videos produced by U.S. public libraries and identify the factors that increase their views. Specifically, we compared 107 popular videos (with over 700 views) and 109 unpopular ones (with less than 12 views) and analysed their differences. This research revealed that the unpopular videos were often too short (less than 10 seconds) or too long (more than 20 minutes). The popular videos overall were more informative than unpopular ones (e.g. with longer titles to identify the contents of the videos). Furthermore, the ratios of tutorials and story times for popular videos (28.0% and 21.5%, respectively) were significantly higher than those for unpopular ones (6.4% and 10.1%, respectively). The ratios of reports on events and event notices among popular videos (7.5% and 12.1%, respectively) were significantly lower than those for unpopular ones (26.6% and 25.7%, respectively).

Posters

21st Century Services: Lifelong Learning as a Common Factor for Libraries and Adult Education Centres

Leena Toivonen, Johanna Jokinen, Marianne Laakso¹, Lene Graugaard-Jensen², Valeria Patregnani, Camille Ridolfi, Davide Frulla, Kyleene Deangelis³, and Danuta Sadownik⁴

¹Education and Wellbeing Centre, Valkeakoski Lifelong Learning Centre and City Library, Finland

²Randers Public Library, Denmark

³Training 2000 psc Comune di Fano, Italy

⁴Fundacja "AKTYWNI XXI", Poland

Abstract:

Background

The concept of lifelong learning is a common factor between libraries and adult education centres. Hand in hand is a project about co-operation of lifelong learning centres and training organizations and public libraries in different EU countries. The partnership consists of five European lifelong learning organizations (public libraries and adult education centres). Project target groups are library and adult education staff and also the customers and students (learners) of these organizations. The intention of this poster is to review the development of co-operation between public libraries and lifelong learning centres and training organizations. The current services offered by partners, using Hand in hand -project as a case project, are described and discussed in a more detailed way and interesting examples about the new services that has been developed during the project. The poster benefits a literature review about public libraries and adult education, concerning co-operation between libraries and lifelong learning institutions. Surveying of users' needs is valuable knowledge for libraries when the new skills or services are developed. The aim of this poster is to describe development of co-operation between public libraries and adult education centres and new necessary innovative processes or services that libraries offer for their customers in adult education.

Methodology Findings

The ideas described are based on the literature review. Findings of scientific literature have been used to explore the characteristics of libraries and adult education centres in order to support lifelong learning in cities. The findings suggests that the public libraries adult education centres have a strength: they have the ability to respond and adapt to changes and new technologies. The results of questionnaire surveys and focus group interviews are summarized in the poster. The knowledge of the partners about new services have been shared between partners in learning activities and because of this new knowledge new pedagogical skills and digital skills has been gained. Furthermore new processes and services of the public libraries and adult education for learning have been developed.

Originality/value.

The topic is worth of attention because the future holds many challenges for libraries and adult education centres in order to manage new technology with new skills concerning pedagogical skills and digital skills. This work is unique in that it focuses public libraries and adult education centres to support lifelong learning together.

Keywords: lifelong learning, adult education centre, public library, services

References: Balapanidou, A. (2015). The challenging role of public libraries as providers of lifelong learning opportunities. *International Journal of Teaching and Education* Vol. III, No. 2.

Sanford, K., & Clover, D. (2016). Contemporary Understandings of Adult Education and Learning in Public Libraries in Canada and Britain. *Canadian Journal for the Study of Adult Education*, 28(1), 49-63.

Assessing the Impact of a Health Sciences Library: A Case Study in the University of Coimbra

Teresa Martins¹, Luiza Baptista Melo²

¹Universidade de Coimbra, Biblioteca das Ciências da Saúde, Portugal

²Universidade de Lisboa, Faculdade de Medicina Dentária / CIDEHUS- Centro Interdisciplinar de História, Culturas e Sociedades, Universidade de Évora, Portugal

Abstract: King Dom Dinis created the oldest university in Portugal and one of the oldest in the world by signing "Scientiae thesaurus mirabilis". Dated 1290, the document started *Estudos Gerais*, which was recognised in the same year by Pope Nicholas IV. The University opened its doors in Lisbon and moved definitely to Coimbra in 1537, by order of King Dom João III, after a period of migration between these two cities. Initially this Superior School (*Estudos Gerais*) was located in the Royal Palace. However, after the University was moved to Coimbra, it began defining its landscape, making it a traditional university city, enlarged in the 20th century with the creation of a second Polo, dedicated to Engineering and Technology, and recently with a third Polo, in the Health Sciences field. Nowadays the University of Coimbra has eight Faculties (Literature, Law, Medicine, Science and Technology, Pharmacy, Economics, Psychology and Educational Sciences, Sports Sciences and Physical Education) and more than 22 thousand students, 1778 teachers and researchers (Academic and Research Staff), of whom 1259 are PhDs and 1272 technical staff. The Health Sciences Library (BCSUC) - is a unit of cultural extension and support to the scientific and pedagogical training of the University of Coimbra. It resulted from the merger of the previous Libraries of the Faculties of Medicine and Pharmacy in the implementation of the strategy of rationalization of the management of spaces and bibliographic catalogue of the University of Coimbra. BCSUC's mission is to make available the access of its documentary funds to Coimbra's entire university community and, in particular, to teachers, researchers and students of the Faculties of Medicine and Pharmacy, as well as to the rest of the national and international research community. The Library also provides a wide range of services and resources to the entire academic community. The main aim of this poster is to present some data from an assessing initiative. We use quantitative methods (ISO16439:2014) to get results, conclusions and good practices to improve the services.

Keywords: academic library, assessment, quantitative methods, ISO16439, benchmarking

Bibliometric Analysis of the Journal Annals of the Faculty of Philology (1961-2000)

Vera Petrovic¹ and Jelena Smailagic²

¹PhD, University library «Svetozar Markovic», Belgrade, Serbia

²MA, Faculty of Culture and Media, Belgrade, Serbia

Abstract: The Faculty of Philology in Belgrade is the publisher of the journal „Annals of the Faculty of Philology“. In the period between 1961 and 2000 year, 887 texts were published in twenty volumes.

The Faculty of Philology published the latest critical texts in linguistics and literature studies, it was an incentive for further research in the field of philological sciences, as well as for discussing important theoretical linguistic and literary issues.

By bibliometric analysis we have come up with contradictory data such as the structure of works in the journal for linguistic and literary sciences, where personal bibliography is represented in 52%.

Of the total number of bibliographic units (887), 429 are published scientific works, and 458 are personal bibliographies. Such a large number of hidden bibliographies is of great importance in studying all the scientific fields studied at the Faculty of Philology.

The number of personal bibliographic units, a total of 458, is an exceptional contribution to the study in individual scientific fields, the individual works of each of the authors from their scientific field. The papers grouped in seven scientific areas, according to the UDK, are the following: personal bibliographies 458, works from general philology 35, works in some languages 19, works from literature and theory of literature 23, education 24 and art 6.

The structure of published works in philology, according to UDK, is classified into groups: Serbian and Croatian language 34 works; Italian language 19; English language 14; Slovenian language 11; German 9; oriental languages 6; Russian language 5 and Spanish language 3 works.

The structure of published works in literature, according to UDC, is classified as: Serbian and Croatian literature 133 works; French literature 40 works; German literature 31 works; English literature 24; Russian literature 15; South Slavic literature 15; Italian literature 9; orientalism 6; Spanish literature 3; literature of certain nations 9 works.

Of the total number of bibliographic units, only 364 contain a summary, and 523 bibliographic units are without abstract. The language structure of these summaries looks like this: in French 121, in English 76; in Russian 74; in German 65; in Italian 19; in Spanish 5; in Serbo-Croatian and Serbian language 4 bibliographic units.

The number of published works in twenty volumes varies: 146 works were published in volume 6 (1966); 134 work in volume 13 (1979); 112 work in volume 17 (1986); 92 work in volume 1 (1961); 54 work in volume 19 (1992); 42 work in volume 20 (2000); 41 work in volume 4 (1964); 29 work in volume 5 (1965), 29 in volume 8 (1968); 26 works in volume 12 (1976), 26 in volume 7 (1967); 21 work in volume 10 (1970), 21 in volume 15 (1983), 21 in volume 18 (1987); 17 works in volume 11 (1974), 17 in volume 16 (1985); 16 works in volume 9 (1969); 15 works in volume 2 (1962), 15 in volume 14 (1982); 13 works in volume 3 (1963).

The structure of scientific texts, a large number of personal bibliographies and numerous hidden thematic bibliographies from the aforementioned scientific disciplines show the importance of bibliometric analysis in the discovery and presentation of Journal „Annals of the Faculty of Philology in Belgrade“.

Keywords: bibliometric analysis, Annals, Faculty of Philology

Developing Information Literacy Skills in Arabic Language To Zayed University Community

Hanin Abueida, Samir Babiker and Shaimaa Sakr

Library & Learning Commons, Zayed University, Abu Dhabi, United Arab Emirates
Higher Colleges of Technology Sharjah Campus

Abstract: The age of the information and knowledge competences forces us to change the traditional teaching methods used in the past. Thus, we find that scientific research has become the most important of lifelong learning in the process of teaching at the

university colleges. This will increase the role of the library more than ever before, it is an important pillar for students to obtain sources of information, that its role is not limited to the library only, but to the librarians who strives to work hard. In addition to the role of librarians in the educational process in developing the information literacy skills of teachers and students. The importance of this study is demonstrated by the need to determine the extent to which Zayed University community benefit from the program of information literacy for students of Arabic language and Islamic studies. Workshops for faculty members have been provided through educational methods of teaching and how to develop them in the future to support the educational process. To verify the hypotheses, the researchers used the descriptive method, a random sample of students and faculty have been used in the questionnaire from five axes: measuring the extent of the librarians' knowledge of the required information, the range of satisfaction, the explanation used, the time of the workshop, and the overall satisfaction level of the workshops. The questionnaire was sent by email to students and faculty who's attended the workshops; and the researchers could obtain the response of 46 female students and faculty members from the Faculty of Arabic Language and Islamic Studies. The results revealed that 93% of the respondents expressed their satisfaction with the accuracy of the required information and the extent to which they were able to explain. 84% of respondents expressed their satisfaction with the information of the presenters about the workshops provided. while 80% of the respondents expressed their satisfaction with the time spent on the workshop ranged from (fully agree and agree), and 97% of the respondents felt that the overall level of the workshop was between (very excellent, good and Very good), and the information provided in the workshop was given about 93% of the total percentage of their satisfaction the answers ranged between (fully agree and agree). Based on these results, the researchers came up with a recommendation according to the attention of Library and Learning Commons in continuous communication with faculty members, to activate information literacy programs for students and develop the skills of librarians and the reference technician, to acquire up-to-date skills and practices that are capable to teach information literacy skills in the future scientific research approaches.

Keywords: information literacy, academic, teaching, workshop, librarians, Zayed University

Empowering Tomorrow's Librarians: A Model for Collaborative Mentorships Between Librarians and LIS Students

Brianne Dosch¹, Jordan Kaufman²

¹Information Specialist, Center for Information and Communication, University of Tennessee, Knoxville, USA

²Research Associate, Center for Information and Communication, University of Tennessee, Knoxville, USA

Abstract: Mentorship is a well-established element of librarianship. However, it can be motivated more from the necessity of “on the job training” for new librarians, than from intentional efforts to build and improve the profession (Lacey & Copeland, 2013). In response to this, many see the need to provide mentorship opportunities throughout the LIS experience, but struggle to know where to begin in building relationships with LIS students and developing structured and meaningful mentorship models (McNiff & Hayes, 2017). This need for mentorship within LIS education is further exacerbated by the fact that of post-graduate students who experienced anxiety and/or depression, 50% of them did not agree that they were provided with “real” mentorship throughout their graduate school experience (Evans, T. et al., 2018). Seeing this opportunity and need, a research team at the University of Tennessee carefully constructed an educational

model, funded by an IMLS grant, to blend a formal curricular and hands-on training, with a special emphasis on developing a mentorship program to produce confident and talented library professionals.

The authors of this poster are two of the twelve recipients of this grant, and we will share our experiences as new library professionals to discuss the value we received from such a hands-on educational and mentorship model. This poster will discuss the importance of creating an educational program that blends curricular and co-curricular experiences, taking a closer look at the mentor-mentee relationship. Due to the traditional theoretical lectures and the interactive nature and collaborative, colleague-like feeling of the mentorship role, we completed research projects that were not only relevant and meaningful to the mentor's work, but to the academic library as a whole. We will provide examples of how this experience significantly grew our practical skill set and how those skills function in our current positions.

This poster will discuss the mentor-mentee relationship from both sides and examine strategies to make the most of a mentorship opportunity, for both the librarian and the student. With collaboration at its heart, rethinking how LIS education and mentorships are structured can not only benefit the student taking part in the experience, but can also positively affect the workplace expectations of the mentor. The poster will share experiences, from both the mentor and mentee points of view and propose a sustainable model of library mentorship that is mutually beneficial and adds value to individual practitioners and librarianship at large.

Keywords: librarianship, mentorship, LIS education, collaboration

References

- Evans T., et al. (2018). Evidence for a mental health crisis in graduate education. *Nature Biotechnology*, 36(3), 282-284.
- Lacy, M., & Copeland, A. J. (2013). The Role of Mentorship Programs in LIS Education and in Professional Development. *Journal of Education for Library and Information Science*, 54(2), 135-146.
- McNiff, L., & Hays, L. (2017). SoTL in the LIS Classroom: Helping Future Academic Librarians Become More Engaged Teachers. *Communications in Information Literacy*, 11(2), 366-377.
<https://doi.org/10.15760/comminfolit.2017.11.2.8>

An Ethnography of Student Behavior in Secluded and Open Spaces: Preliminary Findings and Implications for Library Space Planning.

Natalie Bulick¹ & Susan Fry²

¹Cunningham Memorial Library, Indiana State University

²5426 Cannon Court, Apartment D, Terre Haute, Indiana, 47803

Abstract: The design of physical space in academic libraries has become an increasingly important focus of concern in serving the diverse needs of contemporary student populations. Responding to trends that shift the focus of library space away from collections-centered to more user-centered design, many are exploring ways of creating a better library user experience. To achieve this aim, valuable research has been conducted by directly asking students to articulate their wants and needs via surveys, and in some cases, interviews. However, little research has been devoted to the systematic field observation of how students' use library spaces. Even less of this research has synthesized data findings with robust theoretical frameworks. This poster details the preliminary findings of an ethnographic study at a four-year, public university. Researchers designed a protocol to observe students in freely available secluded and non-secluded library spaces to examine behavior, communication, and social interaction within the context of proxemics theory. The anthropological study of proxemics is useful in evaluating how people behave within immediate organizations of space, and has been successfully applied to the design of public and semi-public

spaces. Attendees will learn of study findings, and how these data can be applied to practical applications such as furniture composition and layout, lighting, and general space planning. Also addressed are details of the next phase of this study.

Keywords: Space/Buildings; Organizational Change; Proxemics

Meeting Abstracts as Bibliographic Indexed Document Type: A Bibliometric Investigation on the Influence on Citation Metrics and Their Signal Function as Emerging Research

Lucy Amez

PhD, Vrije Universiteit Brussel, Departement R&D, Belgium

Abstract: Meeting abstracts are document types that can be defined as general summation of completed papers that were or will be presented at a conference. Although often published in specific books of abstracts or journals' supplements, they are mainly seen as peer reviewed acceptance notes to or a guide of presentations at a conference. Representing findings or results only at a very preliminary stage and condensed matter, they are generally not considered as important research output. Yet, a lot bibliographic databases, such as Clarivate Web of Science or Scopus systematically index meeting abstracts and little research has been performed with respect to their use and impact. Where for many years the Web of Science citation index only applied to the so called citable items - articles, letters, notes and reviews- they recently expanded their citation index to meeting abstract, giving us more insight in the way they are referred. This poster presentation will present results of a bibliometric investigation (research in progress) into the impact of meeting abstracts. The study provides an overview of the number of citations of this specific document type according to time and discipline. Then, taking a case of hematology research, the study will investigate what impact the inclusion of meeting abstracts has on the calculation of bibliometric indicators such as the field normalized citation rates. This is based on a dataset of Web of Science Core collection for the period 2009-2019. The top cited meeting abstracts will be further investigated on the role they played in future publications. It could be that mainly self-citation is into play -the abstract was the seed of own publications in scientific articles- or that it did boost other research - highly cited abstracts lead to highly cited papers at a later stage-. In doing so, the study aims to investigate to what extent successful meeting abstract are indicators for emerging research.

Mobile Information Literacy: More Skills for Users of Information

Mgr. Kamil Matula

Silesian University in Opava, Faculty of Philosophy and Science, Institute of Computer Science and Charles University in Prague, Faculty of Arts, Institute of Information Science and Librarianship, Czech Republic

Abstract: We live in the age of the information society which offers many opportunities but could also be challenging especially for users of information. On a daily basis, we need information in personal and professional life. We seek, select and use information from different sources and use a variety of devices. We could seek information actively or receive them passively. The amount of information that surrounds and influences us is still growing. We need the skills and abilities (competencies) which help us work with information effectively and which prevent us from information overload or choosing irrelevant and wrong information. Information literacy contains those competencies – awareness of information need, abilities to

effectively seek, select, organize, process, evaluate, use and present information. The technical and technological skills (technological literacy) are needed as well.

The information literacy importance (especially ability to select and evaluate information) relates, more than ever, to the growing trend of the mobile information and communication technology usage (so-called Mobile revolution), which can we find in all areas of human activities. Through mobile devices (smartphones, tablets etc.) we can access information almost anywhere and at any time. New wireless network possibilities allow us to connect to the internet and other services and communicate information from distant places and on the move. Does effective work with information in the mobile environment require new skills and abilities? Are competencies of an information literate person sufficient?

The mobile information literacy is a concept of the competencies of an information literate person in the mobile environment. The ways how we seek, process, use and share information on the mobile devices could be different than on the desktop computers. The difference is caused by boundaries of the mobile devices and other factors as smaller displays, touch and small keyboards, voice control, battery capacity, connectivity, responsive or mobile applications, web pages, user interfaces etc. In the mobile environment, we act faster, seek simple information, write short sentences and save time. We try to find the perfect hit on the first attempt. We should be aware of advertisement, wrong interpretation and disinformation.

Do mobile information literacy competencies differ from general competencies of an information literate person? For our analysis and specification of skills and abilities for the mobile environment, we compare standard models of the information literacy with mobile information literacy curricula of courses taught at selected universities and colleges. We search for similar or new (different) competencies which user of information need in the mobile environment.

Keywords: information and communication technologies, mobile devices, information literacy, mobile information literacy, information seeking, libraries, library users

Phd Trainings in the University Library "Svetozar Marković"

Aleksandar Jerkov, Marija Bulatović, Vasilije Milnović

University Library "Svetozar Marković", Belgrade, Serbia

Abstract: Following the contemporary trends within society and the needs of current and future users for new educational activities, Library is continually working on helping its users and colleagues in permanent training through courses, workshops and educations, or with useful content that is available on its web site. This way, Library actively participates in the information literacy of its users and helps bringing it to a higher level. The library has a highly developed educational activity. Educations are held regularly for librarians within accredited courses and workshops, as well as for all students, researchers and other individuals who want to learn how to effectively search for available information sources (e-newsletters, e-books and databases). Since October, 2015, Library is organizing a training dedicated to the design of the doctoral dissertation in accordance with the instructions of the University of Belgrade. At least twice a month interested parties are able to get information on the elements that the dissertation should contain and on the visibility of the dissertation on European and world portals. Registration for this training is necessary, and number of participants is limited to 16-20. The training primarily refers to doctoral students in the final phase of the doctoral dissertation. Topics of the training are: elements of the dissertation

according to the instructions of the University of Belgrade, necessary attachments, depositing in the digital repository and visibility of the dissertation on the Internet. Additional topics may be: search of available sources of information, finding literature, sources in open access and additional sources. Since the 1990s the University Library is a depository library for doctoral dissertations (in printed and electronic form) of the University of Belgrade that are located in the digital repository of the University of Belgrade PHAIDRA intended for storing the work of professors and collaborators of the University which are searched and used in an accordance with the license chosen by the copyright owner. When selecting the link, the most important object information is available, and it can be viewed or downloaded. Doctoral dissertations defended at the universities in Belgrade, Niš, Kragujevac and Priština (Kosovska Mitrovica) are also available on the E-thesis portal. <http://eteze.bg.a.c.rs>. Dissertations defended at the University of Belgrade and searchable through the "E-thesis" system are also visible on the European portal DART Europe <http://www.dart-europe.eu/basic-search.php> and Open Access Theses and Dissertations <https://oatd.org/indexing> - that holds over 3 million dissertations from around the world. Each University is obliged to have its own repository, in addition to the existing national repository which is central. The Ministry of Education, Science and Technological Development has formed a national repository of Doctorates defended in Serbia (NaRDuS), available at nardus.mpn.gov.rs. In this database all the dissertations can be found, which are defended from the adoption of the amendments to the Law, and Universities can add dissertations defended in previous years. Doctoral dissertations must be deposited here in addition to the University and the National Repository. They are available in full text in pdf format with required report of the commission and copyright information.

Keywords: university library, education, PhD training

A Tale of Two Discovery and Citation Analysis Tools: A QQ Comparison of Web of Science and Scopus

Eric Hartnett and Simona Tabacaru

Texas A&M University, College Station, USA

Abstract: For many years, the Texas A&M University Libraries have subscribed to both Scopus and Web of Science, two similar discovery and citation analysis products often used to measure research impact. Following some changes to the Libraries' materials budget, the authors were asked to analyze the two products to determine whether one was preferable to the other. To accomplish this task the authors took a two-fold approach combining quantitative data, like citation, usage, and title overlap analysis, with qualitative data gathered by surveying faculty and other stakeholders. The authors' findings, which were a bit surprising, are presented in this poster.

Keywords: Web of Science, Scopus, product comparison

To Record the Speech or to Synthesise?

Marko Odak¹, Nikolaj Lazić², Aleksandar Stojanović³

¹Faculty of Humanities and Social Sciences, University of Mostar, Mostar, Bosnia and Herzegovina

²Faculty of Humanities and Social Sciences, University of Zagreb, Zagreb, Croatia

³Zagreb University of Applied Sciences, Zagreb, Croatia

Abstract: The right to education and ICT cooperatively opened the way to education for groups that were limited to only small number of professions. The right to education is guaranteed to everyone, through the international human rights system that has come from the Universal Declaration of Human Rights, a document that, at the end of two

World Wars, the international community has opted for work on a better and more humane future. Realizing this right gives everyone the chance to develop their opportunities and to acquire intellectual, spiritual and social autonomy by acquiring knowledge, skills, values and attitudes. In addition, receiving the education and training of good quality are also prerequisites for the enjoyment of many other human rights such as the right to work and the right to informed participation in political and social life. In order to realize and consume the right, people with special needs, especially blind and visually impaired, need the ability to adjust the process for the realization of rights. In this context, the right to education also requires adaptability of the whole process.

Adaptability refers to the state's obligation to adapt education to different groups of children and young people, such as minority members, children with special needs, refugee children, etc. Adaptability implies that education and training are flexible and can be adapted to the different needs of different learners, not that pupils have to adapt to school, which unfortunately is a common practice. To secure the right to education for blind and visually impaired people, the Department of Information Science of the Faculty of Philosophy in Mostar, together with the Faculty Library, has launched a project to prepare teaching materials for blind and visually impaired people.

The question is how to prepare the teaching material and literature needed for blind and visually impaired people and which method to choose for adaptation of teaching materials. Through the pilot project we tried to find out what is happening with the information that the listener receives by signalled through the audio channel and whether the information is better perceived when the signal is human speech rather than artificially created (computer generated) sound.

Methodology: audio recordings of the teaching units has been made from several course topics, after which the recordings are prepared for playback. That was the first test set. The second test set was a textual teaching material prepared for sound reproduction on a computer using computer speech synthesis software. There was no overlap between the test sets. The amount of perceived information was tested for both sets of tests and a comparison of results was made.

The purpose of the research was to find the optimal solution for adapting teaching materials to blind and visually impaired, to provide them with the same opportunities that other students have. Results suggest that human speech is still preferred over computer generated speech and enables faster comprehension.

Keywords: human speech, computer generated speech, learning materials

**The University of the West Indies (UWI) Press E-Book
Project: Opening up Pathways for Caribbean Scholars, Caribbean
Diaspora and International Scholars
Colleen Johnson**

Research Officer, Office of the University and Campus Librarian, Open Campus Libraries and Information Services,
The University of the West Indies, Open Campus, Trinidad and Tobago

Abstract:

Project Overview

With technology driving consumer demand for electronic products in accessible and cost effective formats, the UWI (University of the West Indies) Press's 1992 traditional book publishing moved to its E-Book model in 2016, currently facilitating over 350 peer reviewed published books in a print on-demand system, aiming to reflect diversity

in foreign languages as part of its globalisation thrust. Guided by the UWI's 2017-22 Triple A Strategic Plan with mandates on *Access, Agility and Alignment*, the UWI e-book platform aligns with agility, forging regional and international partnerships to promote its e-content to the retail and course-adoption markets in the Caribbean. One key project goal was to create user accounts thus providing quicker and easier access to Caribbean content to students and faculty in other tertiary institutions and attract international institutions within the Caribbean diaspora. This most recent initiative will make available the Press's digital content to approximately five hundred e-vendors across the globe, expanding visibility and increasing access to UWI Press's award-winning books in a quick and affordable format.

Project Impact

Facilitating UWI Campus Libraries and the UWI Press Cooperation: The 2016 web-based platform initiative between The Alma Jordan Library (AJL) at the UWI St. Augustine Campus and The UWI Press resulted in over 250 e-books being catalogued and viewed online. During this collaborative project, the UWI Press used innovative technology to improve the quality, quantity and impact of Caribbean research and extend its publication reach across the UWI four campuses, the Caribbean region and the world. This project, shared among two geographically dispersed entities - AJL in Trinidad and Tobago and UWI Press in Jamaica) - opened up new pathways for facilitating regional co-operation, encouraging research and publication of Caribbean scholarship while strengthening indigenous control of Caribbean content, electronically. This project secured the AJL the OCLC Award for Innovative Cooperation Initiatives in the Caribbean.

Disruptive Innovation: This can be categorised as a disruptive innovative project, building the UWI's future in scholarly publishing. It resulted in new opportunities for the UWI and its stakeholders to promote regional integration, provide electronic access and visibility of peer-reviewed electronic Caribbean content, enhance operational efficiencies and financial profitability, ensuring a pathway to becoming a more efficient and effective publisher of Caribbean derived scholarly content.

Enhancing Global Visibility and Expanding E-book Usage at the University Libraries: Benefits to the UWI Libraries include visibility and expanded e-book usage, open accessibility, archiving, enhanced metadata and functionality for indexing, advanced user search options and search engine optimization, all combined within an efficient, user-friendly, affordable and low maintenance platform. For Caribbean and global communities, this project facilitated new pathways for teaching, developing personalized and online learning experiences and conducting research using indigenous content.

Recording, Preserving, and Disseminating Research: By developing and implementing an innovative open access web-based publishing platform, the UWI Press provided new pathways for Caribbean scholars to research, publish and disseminate scholarly e-content in all genres and subject areas.

Transforming Access to Caribbean Scholarship: In order to drive web-publishing traffic to the platform the READUP (Research, Excel, Advance, Develop) campaign communication strategy - uploading videos to You Tube - was utilized. This strategy encouraged students to read more and improved information literacy.

Table of Contents

Plenary Speakers

The Challenge of Imagining a New National Library

Dr. Sohair Wastawy..... 1

International Perspectives on Library and Information Science Research Methodology: Trends and Practices for the Profession

Anna Maria Tammaro..... 2

Data Science, Machine Learning, Knowledge Organization and Digital Humanities: Some Reflections on the Fields of Knowledge

Dr. Renato Rocha Souza 2

Workshops

1. **Library Strategies: Evidence for Going Forward? A Workshop**..... 5

2. **Information Search & Discovery, Using an Image as Query: A Workshop** 6

3. **Writing for Wellness Healing After Natural Disasters A Workshop**..... 9

4. **Competitive Intelligence as a Method in Library Context** 10

5. **Picture Analysis based on Erwin Panofsky's Iconology as a Method for Subject Indexing of Images using MaxQDA** 12

6. **Research Opportunities in Systematic Methods: A Menu of Methods** 13

7. **The Seven Virtues of the Librarian Services: An Application in Virtual Reality**..... 14

Special Sessions

1. **Quo Vadis eXtended Reality (XR) in Academic Libraries** 17

2. **Experimental Data Analysis Applied in Library and Information Sciences** 17

4. **Partnerships and Collaborations for Improving Access to Healthcare Information**..... 18

5. **Information Science and Knowledge Organization in Motion: The New Data Science Approach and its Underlying Technologies** 18

6. **Bibliometrics and Scientometrics** 19

Abstracts

A 21st-century Librarian – An Omnipotent Advocate of the Modern Age

Milena Kostić, Šejla Džidić and Aleksandar Jerkov 21

Academic Library: Human Touch in High Tech

Olga Einasto 22

Access to Information and Information Services for the Users of the Sahlgrenska Academy (Medical Faculty) at the University of Gothenburg - Reorganization during 10 years

Annelie Janred 22

Analysis of Citation of World Health Organization Materials in the Russian Medical Journals

Tatyana V. Kaigorodova, Dilyara A. Synyakova, Irina A. Kryukova, Ekaterina I. Zimina 23

Analyzing Social Question and Answering through the Lens of Taylor's Question Negotiation

Sei-Ching Joanna Sin 24

Annual Tracking of User Satisfaction with Library Services through a Customer Satisfaction Index

Dr. Adeline Lee and Brenda Gomez 25

ARCLib – Development of Open Source System for Long-term Preservation for Library Digital Collections

Martin Lhotak 25

Assessing Sustainability Attitudes of Pakistani Nursing Students: Potential of Medical Libraries in Environment Care

Ayesha Khalid, Ghulam Farid, Dr. Syeda Hina Batool 27

Assessing the Information Literacy Instruction Needs of Master Students in a Sino-American University

Mengjie Zou, Joanna Hare 28

Belarusian Way to the Open Access and Open Science: Case Studies

Viatcheslav Britchkovski 28

Best Practices for Library and Nonprofit Partnerships

Tatiana Bryant, Jonathan Cain 29

Beyond the Surveys: Qualitative Analysis from the Academic Reading Format International Study (ARFIS)

Diane Mizrachi, Alicia Salaz 30

A Bibliometric Analysis of Business Literature Regarding Diversity, Inclusion, and Gender

<i>Jean Clenney</i>	31
Big Data in Information Science Literature	
<i>Luiz Carlos Felipe de Oliveira and Beatriz Valadares Cendón</i>	32
Biometric Devices for Better Appraising Users: A Systematic Review of Research Designs in Information Architecture, Information Behavior and Information Retrieval	
<i>Sholeh Arastoopoor, Mahdi Zahedi Nooghabi</i>	33
Blended Learning among Library Professionals in Open Access Environment: Preparing Themselves for 21st Century	
<i>Dr. Vinita Jain</i>	33
Breaking Boundaries: Academic Libraries and Interdisciplinarity in the Big Ten Academic Alliance	
<i>Hilary Bussell</i>	35
Brick by Brick: Building a Local Information Literacy Test	
<i>Susan Gardner Archambault</i>	36
Bridging the Gap: How Institutional Support Affects Librarians' Research Capacity	
<i>Claudia McGivney & Jennifer A. DeVito</i>	37
The British School at Rome Library: Challenges and Opportunities	
<i>Valerie Scott</i>	37
Capturing Structure of Process of Socially Withdrawal People's Information Practice in an Online Message Board: Applying both Narrative Inquiry Approach and Discourse Analysis to their Text-based Narrative and Dialogue	
<i>Hajime Naka</i>	38
The Case for Bounding and Within-Case Sampling in Exploratory Case Study Methodology with Children and Youth Participants	
<i>Dr. Lucy Santos Green</i>	39
Causality of School Libraries and Student Success: Literature Review Using the Mixed Research Synthesis Method	
<i>Laura A. Pasquini, and Barbara Schultz-Jones</i>	39
Co-building Open Science: Portrait of the University Library as a Publisher	
<i>Emilie Barthelet, Jean-Luc De Ochandiano</i>	40
Checking Adherence to the Principles of Transparency and Best Practice in Scholarly Journals as a Library Service	
<i>Jiří Kratochvíl and Lukáš Plich</i>	41
Commercial Advertising in Greek Libraries: An Alternative Funding Strategy	
<i>Nikolaos Koustas, Alexandros Koulouris, Konstantinos Kyprianos, Eftichia Vraimaki</i>	42

A Comparative Study of the Performance Indicators in National Libraries of the World	
<i>Elaheh Hassanzadeh Dizaji, Farideh Osareh</i>	43
Comparing the Risk Management Approaches at Two European Academic Libraries	
<i>Nuria Balagué Mola, Jarmo Saarti</i>	43
A Complex Proposal: Meeting Information Needs in an Academic Library through Consultations and a Single Service Model	
<i>Claudia McGivney</i>	44
The Concept of Innovation for Library Practice in the Light of the European Union’s Official Documents	
<i>Marta Grabowska</i>	46
Connecting Puzzles’ Pieces to Build an Action Plan for End User Education	
<i>Cristina Mancini, Annarita Barbaro, Monica Zedda</i>	46
A Content Analysis of Academic Library Job Advertisements	
<i>Kathy Rosa</i>	47
Continuing Professional Development in Ugandan Public University Libraries: A Survey	
<i>Agnes Namaganda</i>	48
Creative Ways of Demonstrating Your Value Using a Library Dashboard	
<i>Marian Ramos Eclevia, Minette R. Vinzon, Yugosto A. Balbas, and Rizalyn V. Janio</i>	48
Customer Value as a Key Concept for Enhancing the Customer Insight in Academic Library	
<i>Minna Niemi-Grundström</i>	49
Data Lake: Promoting a Home-Grown Mega-Tool for the Assessment Lifecycle	
<i>Sharon Shafer, Dana Peterman, Diane Mizrachi, Todd Grappone</i>	50
Data Science: A New Field and a Curriculum Proposal	
<i>Renato Rocha Souza</i>	51
Designing New Services in Libraries: Rethink Consultation Workshop	
<i>Raphaëlle Bats, Benoît Epron, Christine Michel</i>	51
Developing a Sustainable Platform for Open Access Publishing in Armenia	
<i>Tatev Zargaryan, Ane Landoy, Angela Repanovici</i>	53
Developing an Informed, Educated and Empowered Citizenry: The Role of Libraries, Librarians and Educators	
<i>Godwin Nwachukwu Arua, Celestine Onyebuchi Eze, Ginika Ezeauna, Helen Obioma Ukwuaba</i>	53
Developing Creative “Spaces” in Libraries for Creative Tourism	
<i>Charilaos Lavranos, Petros Kostagiolas, Christina Vouvaki-Manousaki</i>	54

Developing Interdepartmental Relationships to Assess Undergraduate Information Literacy through TATIL

Cristina Colquhoun, Kathy Essmiller, Holly Luetkenhaus, Adam Stroud, Matt Upson..... 54

Development of an Individual Work Performance and Work Design Questionnaire

Mohd Faizal Hamzah, Mohamad Noorman Masrek, and Irwan Kamaruddin Abdul Kadir..... 55

Development of Libraries and Library Science Education in Peshawar-Khyber Pakhtunkhwa, Pakistan: A Historical Review

Dr. Saeed Ullah Jan, Prof. Dr. Teresa S. Welsh 55

Digital Deep Dives into Swedish Municipal Libraries: A Case Description

Arja Mäntykangas..... 56

Digital Document and Collection Analysis Using Qualitative and Quantitative Methods Based on FADGI- and Library Standards Guidelines

Rita Radó..... 57

Digitizing National Records of Jordan: Reality and Challenges

Prof. Dr. Raid Suleiman 58

Documents as Data: Harvesting Knowledge from Textual Resources with DADAlytics

Sarah Ann Adams, Mary Mann, Rose Gold, Ilaria Della Monica, M. Cristina Pattuelli 58

Eastern European Experiences with Consortia of Universities, Research Institutes and Libraries: Romanian Chapter

Ivona Olariu, PhD 59

Embedded in a 4th year Business Course

Britanie Wentzell..... 61

Emerging Challenges of University Libraries in Nigeria in the 21st Century

Godfrey Shaibu Ameh..... 61

An Empirical Study on E-learning in Higher Educational Institutions of Bangladesh

Dr. M. Nasiruddin Munshi & Nazmus Sakib 61

Empowering People with Essential Healthcare Information: A Prerequisite for the Global Sustainable Development Goal on Universal Health Coverage

Neil Pakenham-Walsh, Octavia-Luciana Madge and Geoff Royston 62

Evaluating the School Library Learning Environment

Barbara Schultz-Jones and Cynthia Ledbetter² 63

“Ever Tried. Ever Failed....” – A Health Literacy Case Study and Evidence Review

Anne Madden..... 64

The Evolution of LIS Higher Education in Romania

Dr. Octavia-Luciana Madgeand Dr. Simona Maria Antonescu 65

Experiences Using National Statistics While Doing Research in 22 Libraries in Five Countries

Petra Düren, Markku A. Laitinen, Ane Landoy, Angela Repanovici..... 65

Experiential Learning: Visiting Libraries in Southern California

Dora Yéssica Caudillo Ruiz, María del Socorro Encinas Grijalva, Rubén Federico Martínez Rocha, Juan Carlos Marcos Recio..... 66

Exploitation of Web Data Analytics for the Improvement of Academic Libraries Websites Visibility

Georgios A. Giannakopoulos 67

Exploring the Possibilities with Shared Spreadsheets in Gathering and Analyzing Information on the Usage of Study Rooms in a University Library

Mikael Reberg 68

Exploring Service Philosophy Statements Using Qualitative Content Analysis

Paul Moffett, William H. Weare, Jr. 68

Eye-tracking Experiment Using Book Covers. Visual Data Analysis in Reference to Mind Space Mapping

Veslava Osinska, Grzegorz Osinski 69

Factors Affecting the Job Performance of Information Professionals

Farhana Saeed Hashmi, Kanwal Ameen, Saira Hanif Soroya 69

Factors Affecting the Use of Mobile Learning in Higher Education: An Iranian Context

Mohsen Haji Zeinolabedini, Hamed Abbasi Kassani, Fardin Salemian,..... 70

The Feasibility of a War Library for National Libraries: Case Study National Library and Archives of Iran

Elaheh Hassanzadeh Dizaji, Elham Esmaili Pounaki..... 71

First Steps in Building the Eurasian Latin Archive

Emmanuela Carbé, Nicola Giannelli..... 72

Fix, Develop, Keep! Net Promoter Score as a Tool for Improving Customer Experience

Markku A. Laitinen 73

From Teachers to Students: Digital Literacy Course for University Teachers

Katri Rintamäki 73

From the Diaries of Lifelong Learners: Do They Enjoy the Information Seeking Process?

April L. Colosimo and Giovanna Badia 74

Future of Subject Librarianship: Using Assessment Data to Guide the Continuing Education and Professional Development of Subject Liaison Librarians

Yelena Luckert and Gary W. White 75

General Data Protection Regulation and Libraries

Aikaterini Yannoukakou and Kyriaki Balta 76

Health Librarians on the Move: A Multifaceted Initiative to Guide Researchers Out of the Maze

Giuse Ardità, Franco Toni 77

How Effective Are Credit-bearing Information Literacy Courses? A Pre-test and Post-test Shows the Potential Grown from these Courses

Jade Geary 78

ICT Promoting the Educational Success of Students with Special Educational Needs (SEN)

América Silva, Ana Novo 79

An Idea of Digital Library of Aviation History in Serbia

Ljiljana Macura 80

Identification of the Nature of Scientific Specialties in Conference Proceedings

Vandy Pacetti-Donelson 80

The Impact of Cultural Differences on Information Needs of the Finnish and Japanese Hikikomori: A Comparative Study

Ari Haasio, Hajime Naka 81

The Impact of Library Services on Local Community: The Case Study of Areas Adjacent to US Military Facilities

Kazuyuki Sunaga 82

Impact of Mobile Technology in Libraries Pakistan: An Empirical Study by Using Technology Acceptance Model

Shahzad Abbas, Fakhar Abbas Hashmi, Hafiz Abdul Rehman 82

Impact of Social Networks among the Research Scholars in Madurai Kamaraj University – An Analytical Study

Dr. K.Chinnasamy 83

Implementation of Integrated Library Systems in Academic Libraries in Uganda: Experience of Makerere University Library (Maklib)

Nakayima Sarah Maka, Dr. Helen Byamugisha 84

Implementing Web 2.0 in a Ghanaian academic library: The University for Development Studies' experience

Miriam Linda Akeriwe 84

Importance of Students' Awareness of the Need for Information Literacy to Avoid Plagiarism	
<i>Petruša Miholič</i>	85
IN-PROVE: The Software Development for the Effective Digitization and Long-term Preservation of the Modern Library Collections	
<i>Tomas Foltyn</i>	86
Inclusive Academic Library: From the Perspective of Students and Staffs with Disabilities in Malaysia	
<i>Siti Mawarni Salim, Mohd Faizal Hamzah, Ilina Syazwani</i>	87
Increasing Employability of HSS Graduates through Intervention to Improve Their Information Skills	
<i>Pradeepa Wijetunge</i>	87
Information-seeking Behavior of Engineering and Basic Science Students: Implications for Library Services	
<i>Angela Repanovici, Gordana Latinovic-Rauski</i>	89
Information Literacies to Transform Society	
<i>Godwin Nwachukwu Arua</i>	89
Information Literacy for Effective Utilisation of Information Resources in Academic Libraries in Nigeria	
<i>Emmanuel Uwazie Anyanwu, Ifeyinwa Blessing Okoye, Chinyere Lemoha</i>	90
Informed Learning Design: A Tool for Integrating Information Literacy into Disciplinary Curricula	
<i>Clarence Maybee, Michael Flierl</i>	91
Information Literacy @ KU Leuven University Libraries	
<i>Kim De Roo, Inge Discart, Krizia Tuand, Veerle Tuerlinckx</i>	92
Information Management and Digital Transformation: Uses and Impacts of New Technologies	
<i>Ricardo Rodrigues Barbosa, Maria das Graças Murici</i>	92
Information System Applications in Smart Cities, Smart Buildings and Smart Life	
<i>Renata Maria Abrantes Baracho</i>	93
Innovation in Libraries: Virtual Reality and Training for Librarians at the UNAM (Universidad Nacional Autónoma de México)	
<i>María Guadalupe Venteño Jaramillo, Martha Ibáñez Marmolejo, Eduardo Trujillo Sánchez, Estefanía Cabrera Jaimes, Ma. del Carmen Ramos, Víctor Hugo Franco Serrano, Javier Rodrigo Díaz Espinosa, Verónica Páez and Isabel Ávila</i>	93
Institutional Repository and Academic Social Network: A Case Study at the University of Lisbon	
<i>Luiza Baptista Melo and Tatiana Sanches</i>	95
Instructional Media Preference, Availability and Use in Instructional Delivery as Determinants of Middle level Learners Academic Achievement in Core Subjects in Akure Metropolis	

<i>Pius Olatunji Olajo, A. S. Gbotoso, Moyosade Omolade Oguntuase</i>	95
The International Spread of the Brown-Proschan Model for Imperfect Repair	
<i>Christos H. Skiadas</i>	96
Interviewing Documents for Research: Prospecting for Information and Making Connections	
<i>Dr. Angela P. Branyon</i>	97
Introducing the Open Test of Information Literacy (OTIL): A Flexible Test for Different Information Contexts	
<i>Dr. Marina Rachitskiy, Dr. Leslie van der Leer & Helena Hollis</i>	97
Investigate the Relationship between Knowledge Management and Organizational Commitment among Staff of Khaje Nasir Toosi University of Technology	
<i>Maryam Langari Moghadam, Mosayyeb Samanian</i>	98
Invitations to interview on the role of the library in the undergraduate academic life: survey to select participants from diverse origin through posters and digital social networks	
<i>Alma Beatriz Rivera-Aguilera¹, Salvador Carrillo ¹, Alfredo Cruz², María Concepción Herrera¹, Sergio Salazar-Robles², Gabriela Solano², Andrea Horcasitas¹</i>	99
Is it Time to Move Out of the Comfort Zone? About Results of the Library Visitors and Non-visitors Study	
<i>Mai Põldaas</i>	99
Journal Impact Measures in the Humanities: A Blessing or A Curse?	
<i>Rafael Repiso, Christian Gumpfenberger, Martin Wieland & Juan Gorraiz</i>	100
Learning from Caregivers' Narratives in a Literary Competition	
<i>Ivana Truccolo</i>	101
Learning Media Availability and Secondary School Teachers' Adoption in Curricula Delivery in Core Subjects in a Nigerian Metropolis	
<i>Pius Olatunji Olajo, Jabesh Ajigboye, Tolulope Oluyemisi Adepoju</i>	103
Lessons Learned from a Library Based Photovoice Project	
<i>Vicky Duncan and Samuel Schultz</i>	104
Lessons Learned from the Greek University Consortia and Synergies: The Impact on the Research and Science	
<i>Alexandra Trianti, Iro Tzormbatzaki, Ageliki Oikonomou, Anthi Katsirikou</i>	104
Librarian as a Collaborator in Supporting Spatial Humanities Research Projects	
<i>Nicole Kong</i>	105
Librarian Image in Media and Real World	
<i>Tsai-yu Hsieh, Szu-chia Lo</i>	106

Libraries and Social Justice: From Impacts to Ethics of Care

Raphaëlle Bats, Marie D. Martel 106

Library and Information Sciences Research in India: A Bibliometrics Study of Indian Librarians

Lambodara Parabhoi 108

Library Data in the United States

Lisa M. Frehill 109

Library in the Media - Analysis of the Libraries' Representation in the Media

Stanka Jovičić and Bojan Kundačina 110

Library Internet Use and Demographic Characteristics of Undergraduates in a Nigerian University: Uncovering the Areas of Need

Nkeiru A. Emezie, Scholastica A.J. Chukwu, Colette O. Onyebinama 111

Library Support for Research Data Management: A Taxonomy of Services

Fernanda Gomes Almeida and Beatriz Valadares Cendón 111

Library Space Through Users' Eyes: A Qualitative Research Conducted by the National and University Library, Ljubljana (Slovenia)

Melita Ambrožič, Anja Mlakar, Eva Potisek, Marjetka Sluga and Damjana Vovk 112

Lifelong Learning of the Profession of Librarian and Information Professional in Health Care in the Czech Republic

Helena Bouzková, Eva Lesenková, Richard Papík, Kateřina Žďárská 113

Long-term Preservation of a Web Resource: PAD Web Archiving

Paul Gabriele Weston, Primo Baldini, Laura Pusterla 114

Making Public Libraries Safe Places for All

Jana De Brauwere 114

Making Sense of Customer Satisfaction Data: Communicating Effectively to Senior Management and Library Operations Staff through Visualization Dashboards

Brenda Gomez and Dr. Adeline Lee 115

The Management and Long-term Preservation of Modern Book Collections - The Cooperative System in the Czech Republic

Mgr. Anna Cajthamlova, Mgr. Tomas Foltyn 116

Mapping Research Trends in Institutions of Higher Education in India

Kruti Trivedi and Jagdish Arora 116

Mapping the Inside of a Collection: ArcGIS as Content Analysis Tool

Benjamin Aldred 117

Mapping the Structure of the Scientific Domain of Ontology

Nooshin Hormozinezhad, Atousa Koochak, Fatima Fahimnia 117

Measuring Information Literacy Core Competency of Social Science Researchers in National Capital Region, India

Rajesh Singh Shailendra Kumar..... 118

Measuring Information Literacy in Algerian Public Libraries: Competency and Skills of Library Professionals

Khedidja Oulem 119

Methods of Computing Reader Numbers in a Digital Library

Mirosław Górny, Artur Wierzbicki..... 119

MiCISAN, Institutional Repository. A Collaborative Project in the Context of Open Science

Norma Aida Manzanera Silva and Hugo Alberto Guadarrama Sánchez..... 120

Migrating from Integrated Library Systems to Library Services Platforms: An Exploratory Qualitative Study for the Implications on Academic Libraries' Workflows

Efsthatios Grammenis and Antonios Mourikis..... 121

Motivation and Job Satisfaction of Library Paraprofessional Staff: A Systematic Review

Sumaira Hussain, Saira Hanif Soroya 121

Motivation, Self-efficacy and Perception of Graduate Students on Information Literacy Courses

Qianxiu Liu..... 122

Musical Documentary Heritage in Spanish Defence Central Library: A Project of Online Exhibition for its Dissemination

Rosario Arquero-Avilés and Brenda Siso-Calvo 123

National Heritage and Retrospective National Bibliography Activities in Sri Lanka

W. Punyawardena..... 124

New Approach to Information Literacy Instruction: An Experimental Study

Marzieh Siamak and Dr. Alireza Isfandyari-Moghaddam and Dr. Tibor Koltay 125

New Data on Knowledge and Application of Information Literacy Framework in Higher Education Libraries: Results of a Questionnaire Survey to Portuguese Librarians

Tatiana Sanches, Maria Manuel Borges 125

Non- LIS Organization's Initiative for Capacity Building of LIS Professionals in India

Salek Chand..... 126

On the Introduction of AI and Robots into the Operation of School Libraries

Mutsumi Oohira, Rei Iwasaki, and Tetsuya Kubota 128

Ontologies and Classification: The Unavoidable Interplay between Human Reasoning and Machine Reasoning

Maurício B. Almeida, Benildes C. Maculan, Eduardo F. Ribeiro 129

Organizational Performance in University Libraries: A Comparative Study between Mexico and Spain

Mtra. María del Socorro Encinas Grijalva, Dr. Juan Carlos Marcos Recio, Dra. Dora Yéssica Caudillo Ruiz, Mtro. Rubén Federico Martínez Rocha 129

Overview of the Growth and Development of Services Provided by Virtual Library of Serbia Network and its Impact on Collection of Library Statistical Data in Serbia

Emina Čano Tomić and Ljubica Ljubišić 130

Perspectives of OA and Cancer Researchers: Analysis of Selected Publications

Christie Wiley 131

PhD Programme in Information and Communication Sciences at the University of Zagreb

Nikolaj Lazić, Jadranka Lasić Lazić, Sonja Špiranec 131

The Physical Library Space as a “Third Place” for Socialization and Collaborative Learning in the New Digital Era

Angeliki Garoufali, Eleni Ntrogouli, Vasileios Batalas 132

The Power of Proactive Information: A Prototype of Mobile Application for Bring the Value of Library Services to the Parliament

Luis Armando González, Adolfo Hernández and Teddy Alfaro 133

Preparing, Not Repairing: A Case Study and Best Practices in Proactive Link Management

Leah P. Cannon, Brianne Dosch, Hannah Gunderman 134

Problems in the Application of Innovations in the Library Sphere (The Bulgarian Case)

Evgeniya Rusinova 135

Professional Development and Strategic Management in Libraries

Dr. Humera Mah Jabeen, Dr. Sajida Mah Jabeen 136

Project-Based Learning in an Advanced Library and Information Science Course

Szu-chia Lo 137

Promoting a Culture of Assessment throughout the UCLA Library Organization

Dana Peterman, Sharon Shafer, Diane Mizrachi, Todd Grappone 137

Provenance of Traditional Knowledge (TK) and its Preservation Special Reference to Sri Lanka

Kamani Perera, Prasanna Ranaweera 138

Publications on Artificial Intelligence in Databases in the Field of Library and Information Science. Subjects and Research Problems

<i>Jolanta Szulc</i>	139
A Qualitative Survey of Canadian Academic Librarians on Diversity and Leadership	
<i>Maha Kumaran</i>	139
Quality and Qualitative Control of E-Learning Purposes in Greek Universities!	
<i>Vasiliki Kalliampakou, Ioanna Kalliampakou</i>	140
Quantitative Analysis of International Large Research Infrastructure Characteristics and Changes based on Policy Text	
<i>Yizhan Li, Shijie Guo, Zexia Li</i>	141
Reading between the Lines	
<i>Madeleine Sturma</i>	142
Reimagining the Role of the Information Professionals in the Educational Process: The Case of the Sultanate of Oman	
<i>Prof. Naeema Jubr, Dr. Rahma Alkharousi</i>	142
Relationship of Business Students' Perceived Information Literacy Self-Efficacy with Personal and Academic Variables	
<i>Muhammad Asif Naveed and Madiha Mahmood</i>	143
Relevance of the Spatial Triad Theory in (re) Resigning and Planning of Library Spaces	
<i>Caroline Ilako, Dr. Joyce Bukirwa M., Prof. Elena Maceviciute</i>	145
Research and Publication Practices of Social Science Faculty: A Narrative Inquiry	
<i>William H. Weare, Jr.</i>	145
Research Data Management: A Review of UAE Academic Library Experience	
<i>Judith Mavodza</i>	146
Research Libraries in Digital Culture	
<i>Olga L. Lavrik</i>	147
Research Methods and Librarian Practice: The Experience of a Public Library in the State of São Paulo, Brazil	
<i>Luis Claudio Borges, Gilda Olinto</i>	148
Research on Development Strategy of China's Technology Transfer Based on SWOT-QSPM Model	
<i>Liu YuFang ShuXu Wenjuan Lu YingYang Zhiping</i>	149
Researchers and Archival Institutions: Methods, Regulations and Policies in the Archival Research	
<i>Eleni Mamma</i>	149
Role of Social Media as Advertising Tool for Libraries: Evidence from COMSATS Library by using Technology Acceptance Model	

<i>Shahzad Abbas, Fakhar Abbas Hashmi, Hafiz Abdul Rehman</i>	150
The Role of Spanish Academic Libraries for the Digital Dissemination of Research	
<i>Brenda Siso-Calvo, Rosario Arquero-Avilés, Gonzalo Marco-Cuenca</i> ,.....	151
Round Two, What's New? Comparing Two Phases of UX Research at the University of Toronto Scarborough Library	
<i>Sarah Guay and Sue Reynolds</i>	151
Royal College of Nursing Regional Contacts Outreach Project	
<i>Phil Segall</i>	152
Rural School Libraries Anchoring Community Mental Health Literacy	
<i>Denice Adkins, Beth Brendler, Melissa Maras & Kerry Townsend</i>	152
Russian Academic Libraries within the Information/Learning Commons System: The Case from Peter the Great St. Petersburg Polytechnic University	
<i>Natalia Sokolova, Alexander Plemnek</i>	153
Scaffolding Google: A Set of Training Cards	
<i>Rafael Ibarra</i>	154
Scholarly Contributions of a Global Pharmaceutical Company Scientists: A Bibliometric Study	
<i>Dr. Anna Ching-Yu Wong</i>	154
The Scholars Profile of Indian Institute of Technology Madras	
<i>Mahendra Jadhav, P. Kannan</i>	155
School Libraries and Makerspaces – A Metric Research	
<i>Deise Jesus, Ana Novo</i>	156
School Libraries in National Minority Schools	
<i>Debora Radolović</i>	157
Search. Discover. Create. Building a Suite of Mobile Apps for Academic Libraries	
<i>Valeda Dent, Kiichi Takeuchi, Ben Turner, Heather Ball, Caroline Fuchs, Ann Jusino, Shilpa Karnik</i>	157
Secondary Data for Librarians: Benefits and Challenges	
<i>Ana Dubnjakovic</i>	158
Showcasing Relevance by Measuring Scholarly Impact of Research at the Personal or Departmental Level	
<i>Lutishoor Salisbury</i>	158
Socioeconomic Status and Self Concept Development of Students with Visual Impairment in Punjab	
<i>Dr. Sajida Mah Jabeen , Dr. Humera Mah Jabeen</i>	159

Social Impact of Libraries. Let's Nurture the Language - How Public Libraries Can Play the Vital Role in Language Campaigne

Jasmina Ninkov 159

Springer Nature and iversity

Francesca Bonadei 160

Statistics on the Directory of Open Access Books

Keita Tsuji..... 161

The Status of Electronic Theses and Dissertations (ETDs) Outputs amongst Institutional Repositories in South African Universities

Themban Malapela and Zanele C. Hadebe 161

Storytelling about the Italian Public Libraries. Considerations about Method and Emerging Research Patterns

Chiara Faggiolani - Anna Galluzzi 162

The Study of Readability of Bibliographical Styles in Digital Environment Using Eye-tracking

Adam Szalach..... 162

A Study of the Cultural Intelligence of Special Libraries: Phase 1

Michele A. L. Villagran..... 163

Supporting Social Innovations in Libraries in the Czech Republic: A Case Study of CIDES project

Ladislava Zbiejczuk Suchá, Eliška Bartošová, Roman Novotný, Eva Víchová 163

Suppression of Scholarly Journals: A Case Study of the Journal Citation Reports during 2010 to 2014

Mohammadamin Erfanmanesh 164

Systemizing Factors Influencing Scholars Open Access Publishing Behavior: Theory of Planned Behavior Approach

Fausta Kepaliene 165

Systematic Reviews: Fast Track to Service Delivery

T. Derek Halling, Margaret Foster, Susan Goodwin 165

Taking Risks - Moving from the Traditional while Partnering for Student Success

Ellen Safley 166

Teaching Information Competences in a Digital World for Future Professionals: Strategies and Methodologies to Support Research Librarians as Trainers in Scientific and Technical Information

Ornella Russo 166

Teaching Music Bibliography and Information Literacy: A New Challenge for Italian Music Librarians

Carmela Bongiovanni 167

Theoretical and Practical Approaches on International Exchange of Publications. Study of Case: Lucian Blaga Central University Library of Cluj-Napoca, Romania	
<i>Bogătean Alina Ioana, Lucian Blaga</i>	168
"Those Who Cannot Remember the Past are Condemned to Repeat it": Create Criteria for Documenting Experiences in Libraries and National Archives as Organizational Memory	
<i>Narges Neshat</i>	168
A Three-phased Investigation in "Reference Librarians" in Academic Libraries in Republic of Moldova	
<i>Ane Landoy, Natalia Cheradi, Angela Repanovici, Silvia Ghinculova</i>	169
Towards a Fair Approach to Scholarly Publishing: The KU Leuven Fund for Fair Open Access	
<i>Laura Mesotten, Demmy Verbeke</i>	169
Transformation in University Libraries for Agricultural SMEs in Uganda: Harnessing Emerging Research and Innovation Information Opportunities	
<i>Robert Stalone Buwule, Stephen Mutula</i>	170
Understanding the Impact of an Institutional Repository – A Big Data Mining and Visualization Project	
<i>Nicole Kong, Nina Collins</i>	171
Use of Libraries at Sultan Qaboos University of Social Media Features in Providing Information Services	
<i>Ms. Khalsa AL-Barashdi</i>	171
The Use of New Technologies in Contemporary Information Services	
<i>C. Floriselda Cuesta Rodríguez, José Carlos Sánchez Bernabé</i>	172
Using Academic Libraries to Promote Research Data Management Practices among Faculty at the Kwame Nkrumah University of Science and Technology (KNUST), Kumasi-Ghana	
<i>Richard Bruce Lamptey and Samuel Kotei Nikoi</i>	173
Using Quantitative Analysis to Explore the Journal Collection Needs for Researchers of New Developing Field: A Case Study of Printed Electronics Field	
<i>Ming Wu</i>	173
Using Smart Phones to Enhance HIV Prevention Knowledge among Village Doctors in Developing Regions: A Study in Guangxi, China	
<i>Yao Zhang, Shan Qiao, Xiaoming Li, Zhiyong Shen, Weigui Guo</i>	174
Utilization of Library Resources by Academic Staff Members of Institute of Agricultural Research and Training (IAR&T) Ibadan, Nigeria	
<i>Pius Olatunji Oloajo, Esther C. Ogedengbe and Adeola F. Folasade</i>	176
Visualizing the Scholarly Impact of Medical Education Researchers	
<i>William H. Mischo, Mary C. Schlembach, and Elisandro Cabada</i>	177

What is Plagiarism? Do Academic Teachers and Librarians Agree?: An Investigation to Shape a Basis for Discussion to Promote Concerted Efforts in Helping Students to Better Academic Practice at One Swedish University

Britt Omstedt..... 178

What Makes a Data Librarian?: An Analysis of Job Announcements and Job Descriptions for Data Librarian

John Christopherson L.T. Fredeluces, Roselle S. Maestro, Marian Ramos-Eclevia, Carlos L. Eclevia Jr.
..... 179

What Makes a Great Leader? A Bibliometric Analysis of Leadership Theory and Practice in LIS Literature

Teresa S. Welsh 180

What Makes Filipino Librarians Happy? Exploring Workplace Happiness of Young and Aging Librarians

Marian Ramos-Eclevia, Rizalyn V. Janio, Rhea Rowena U. Apolinario and Carlos L. Eclevia Jr. , 181

Young People's Conceptions and Practices of Digital Safety: An Approach to Measurement

Dr. Ross J. Todd 181

YouTube Videos Produced by U.S. Public Libraries: Analysing Popularity and Factors that Increase Views

Yuhiro Mizunuma, Kazuki Sato, Fumiaki Miyazaki, and Keita Tsuji 183

Posters

21Century Services: Lifelong Learning as a Common Factor for Libraries and Adult Education Centres

Leena Toivonen, Johanna Jokinen, Marianne Laakso, Lene Graugaard- Jensen, Valeria Patregnani, Camille Ridolfi, Davide Frulla, Kylene Deangelis and Danuta Sadownik 185

Assessing the Impact of a Health Sciences Library: A Case Study in the University of Coimbra

Teresa Martins, Luiza Baptista Melo..... 186

Bibliometric Analysis of the Journal

Vera Petrovic and Jelena Smilagic..... 186

Developing Information Literacy Skills in Arabic Language To Zayed University Community

Hanin Abueida, Samir Babiker and Shaimaa Sakr..... 187

Empowering Tomorrow's Librarians: A Model for Collaborative Mentorships Between Librarians and LIS Students

Brianne Dosch, Jordan Kaufman 188

An Ethnography of Student Behavior in Secluded and Open Spaces: Preliminary Findings and Implications for Library Space Planning.

<i>Natalie Bulick & Susan Fry</i>	189
Meeting Abstracts as Bibliographic Indexed Document Type: A Bibliometric Investigation on the Influence on Citation Metrics and Their Signal Function as Emerging Research	
<i>Lucy Amez</i>	190
Mobile Information Literacy: More Skills for Users of Information	
<i>Mgr. Kamil Matula</i>	190
Phd Trainings in the University Library "Svetozar Marković"	
<i>Aleksandar Jerkov, Marija Bulatović, Vasilije Milnović</i>	191
A Tale of Two Discovery and Citation Analysis Tools: A QQ Comparison of Web of Science and Scopus	
<i>Eric Hartnett and Simona Tabacaru</i>	192
To Record the Speech or to Synthesise?	
<i>Marko Odak, Nikolaj Lazić, Aleksandar Stojanović</i>	192
The University of the West Indies (UWI) Press E-Book Project: Opening up Pathways for Caribbean Scholars, Caribbean Diaspora and International Scholars	
<i>Colleen Johnson</i>	193

Author Index

A

Abbas Hashmi Fakhar	82, 150
Abbas Shahzad.....	82, 150
Abbasi Kassani Hamed.....	70
Abdul Rehman Hafiz	82, 150
Abueida Hanin	187
Adeline Lee Dr.	25, 115
Adkins Denice	152
Aida Manzanera Silva Norma	120
Ajigboye Jabesh	103
Akeriwe Miriam Linda.....	84
Alberto Guadarrama Sánchez Hugo	120
Aldred Benjamin	117
Alfaro Teddy	133
Alina Ioana Bogătean.....	168
Alireza Isfandiyari-Moghaddam Dr.....	125
Almeida Maurício B.	129
Ambrožič Melita	112
Ameen Kanwal.....	69
Amez Lucy.....	190
Angela P. Branyon Dr.....	97
Ann Adams Sarah	58
Anna Cajthamlova Mgr.	116
Anna Ching-Yu Wong Dr.	154
Arastoopoor Sholeh.....	10, 12, 33
Ardita Giuse	77
Armando González Luis	133
Arora Jagdish	116
Arquero-Avilés Rosario	123, 151
Asif Naveed Muhammad	143
Ávila Isabel.....	93, 94

B

Babiker Samir.....	187
Badia Giovanna.....	74
Balagué Mola Nuria	43
Balbas Yugosto A.	48
Baldini Primo	114
Ball Heather	157
Balta Kyriaki	76
Baptista Melo Luiza	95, 186
Barashdi Khalsa AL.....	171
Barbaro Annarita	46
Barthet Emilie	40
Bartošová Eliška.....	163
Batalas Vasileios	132

Bats Raphaëlle.....	51, 106
Beatriz Rivera-Aguilera Alma	99
Bлага Lucian	168
Blessing Okoye Ifeyinwa	90
Bonadei Francesca	160
Bongiovanni Carmela	167
Bouzková Helena.....	113
Brendler Beth	152
Britchkovski Viatcheslav.....	28
Bruce Lamptey Richard	173
Bryant Tatiana.....	29
Bulatović Marija	191
Bulick Natalie	189
Bussell Hilary.....	35

C

Cabada Elisandro.....	177
Cabrera Jaimes Estefanía	14, 93
Cain Jonathan.....	29
Cannon Leah P.	134
Čano Tomić Emina.....	130
Carbé Emmanuela	72
Carlos Felipe de Oliveira Luiz	32
Carlos Marcos Recio Juan	66
Carlos Sánchez Bernabé José	172
Carrillo Salvador	99
Chand Salek.....	126
Cheradi Natalia.....	169
Chinnasamy K.Dr.	83
Christopherson L.T. Fredeluces John	179
Chukwu Scholastica A.J.	111
Claudio Borges Luis	148
Clenney Jean	31
Collins Nina	171
Colosimo April L.	74
Colquhoun Cristina.....	54
Concepción Herrera María.....	99
Cristina Pattuelli M.....	58
Cruz Alfredo	99

D

das Graças Murici Maria	92
De Brauwere Jana	114, 115
De Ochandiano Jean-Luc.....	40
De Roo Kim.....	92
Deangelis Kylene	185
del Carmen Ramos Ma.....	93

del Socorro Encinas Grijalva María.....	66	Gorraiz Juan	100
Della Monica Ilaria	58	Grabowska Marta	46
Dent Valeda	157	Grammenis Efstratios.....	121
Derek Halling T.	165	Grappone Todd	50, 137
DeVito Jennifer A.	37	Graugaard- Jensen Lene.....	185
Discart Inge	92	Guadalupe Venteño Jaramillo María 14, 93, 94	
Dora Yéssica Caudillo Ruiz Dra.	129	Guay Sarah	151
Dosch Brianne.....	134, 188	Gumpenberger Christian.....	100
Dubnjakovic Ana.....	158	Gunderman Hannah.....	134
Duncan Vicky	104	Guo Shijie	141
Düren Petra	65	Guo Weigui	174
Džidić Šejla.....	21		
E		H	
Eclavia Jr. Carlos L.....	179, 181	Haasio Ari.....	81
Einasto Olga.....	22	Hadebe Zanele C.	161
Elena Maceviciute Prof.....	145	Haji Zeinolabedini Mohsen	70
Emezie Nkeiru A.	111	Hanif Soroya Saira.....	69, 121
Epron Benoît.....	51	Hare Joanna	28
Erfanmanesh Mohammadamin.....	164	Hartnett Eric.....	192
Esmaili Pounaki Elham	71	Hassanzadeh Dizaji Elaheh	43, 71
Essmiller Kathy	54	Helen Byamugisha Dr.....	84
Ezeauna Ginika	53	Hernández Adolfo	133
F		Hollis Helena	97
Fahimnia Fatima	117	Horcasitas Andrea	99
Faizal Hamzah Mohd	55, 87	Hormozinezhad Nooshin.....	117
Farid Ghulam	27	Hsieh Tsai-yu	106
Federico Martínez Rocha Rubén	66	Hugo Franco Serrano Víctor	14, 93, 94
Flierl Michael	91	Humera Mah Jabeen Dr.	136, 159
Floriselda Cuesta Rodríguez C.	172	Hussain Sumaira.....	121
Folasade Adeola F.....	176	I	
Foltyn Tomas	86	Ibáñez Marmolejo Martha	93, 94
Foster Margaret.....	165	Ibarra Rafael.....	154
Frehill Lisa M.....	109	Ilako Caroline	145
Frulla Davide.....	185	Iwasaki Rei	128
Fry Susan	189	J	
Fuchs Caroline	157	Jadhav Mahendra.....	155
G		Janio Rizalyn V.....	48, 181
Gabriele Weston Paul.....	114	Janred Annelie	22
Gardner Archambault Susan	36	Jerkov Aleksandar	21, 191
Garoufali Angeliki	132	Jesus Deise	156
Gbotoso A.S.	95	Joanna Sin Sei-Ching	24
Geary Jade	78	Johnson Colleen	193
Ghinculova Silvia.....	169	Jokinen Johanna	185
Giannakopoulos Georgios A.	67	Jovičić Stanka	110
Giannelli Nicola.....	72	Joyce Bukirwa M. Dr.	145
Gold Rose.....	58	Juan Carlos Marcos Recio Dr.....	129
Gomes Almeida Fernanda	111	Jusino Ann	157
Gomez Brenda	25, 115	K	
Goodwin Susan	13, 165	Kaigorodova Tatyana V.	23
Górny Mirosław	119	Kalliampakou Ioanna.....	140

Kalliampakou Vasiliki	140	Madge Octavia-Luciana.....	62
Kamaruddin Abdul Kadir Irwan	55	Maestro Roselle S.	179
Kamil Matula Mgr.	190	Mahmood Madiha	143
Kannan P.....	155	Malapela Thembani	161
Karnik Shilpa	157	Mamma Eleni	149
Katsirikou Anthi	104	Mancini Cristina	46
Kaufman Jordan.....	188	Mann Mary	58
Kepaliene Fausta	165	Mäntykangas Arja	56
Khalid Ayesha	27	Manuel Borges Maria.....	125
Kong Nicole.....	105, 171	Maras Melissa	152
Koochak Atousa	117	Marco-Cuenca Gonzalo.....	151
Kostagiolas Petros	54	Maria Abrantes Baracho Renata	93
Kostić Milena	21	Maria del Socorro Encinas Grijalva Mtra. ...	129
Kotei Nikoi Samuel.....	173	Maria Tammara Anna	2
Koulouris Alexandros.....	42	Marina Rachitskiy Dr.	97
Kouostas Nikolaos.....	42	Martel Marie D.....	106
Kratochvíl Jiří	41	Martins Teresa	186
Kryukova Irina A.....	23	Mavozda Judith	146
Kubota Tetsuya.....	128	Mawarni Salim Siti	87
Kumaran Maha	139, 140	Maybee Clarence	91
Kundačina Bojan	110	McGivney Claudia	37, 44
Kyprianos Konstantinos	42	Mesotten Laura.....	169
L		Michel Christine	51
Laakso Marianne	185	Miholič Petruša	85
Laitinen Markku A.	65, 73	Milnović Vasilije	191
Landoy Ane	53, 65, 169	Mischo William H.	177
Langari Moghadam Maryam	98	Miyazaki Fumiaki.....	183
Lasić Lazić Jadranka	131	Mizrachi Diane	30, 50, 137
Latinovic-Rauski Gordana	89	Mizunuma Yuhiro.....	183
Lavranos Charilaos.....	54	Mlakar Anja	112
Lavrik Olga L.....	147	Moffett Paul.....	68
Lazić Nikolaj.....	131, 192	Mourikis Antonios.....	121
Ledbetter Cynthia	63	Mutula Stephen	170
Lemoha Chinyere.....	90	N	
Lesenková Eva	113	Naeema Jubr Prof.	142
Leslie van der Leer Dr.	97	Naka Hajime.....	38, 81
Lhotak Martin	25	Namaganda Agnes	48
Li Xiaoming	174	Nasiruddin Munshi M.D.....	61
Li Yizhan	141	Neshat Narges.....	168
Li Zexia	141	Niemi-Grundström Minna.....	49
Liu Qianxiu	122	Ninkov Jasmina	159
Ljubišić Ljubica	130	Noorman Masrek Mohamad.....	55
Lo Szu-chia	106, 137	Novo Ana.....	79, 156
Luckert Yelena	75	Novotný Roman	163
Lucy Santos Green Dr.	39	Ntrogouli Eleni	132
Luetkenhaus Holly	54	Nwachukwu Arua Godwin	53, 89
M		O	
Maculan Benildes C.	129	Obioma Ukwuaba Helen	53
Macura Ljiljana	80	Octavia-Luciana Madge Dr.	65
Madden Anne	64	Odak Marko	192

Ogedengbe Esther C	176	Rowena U. Apolinario Rhea	181
Oikonomou Ageliki	104	Royston Geoff	62
Olariu Ivona PhD.....	59	Rubén Federico Martínez Rocha Mtro.....	129
Olatunji Olajo Pius.....	95, 103, 176	Rusinova Evgeniya.....	135
Olinto Gilda.....	148	Russo Ornella	166
Oluyemisi Adepoju Tolulope	103		
Omolade Oguntase Moyosade	95	S	
Omstedt Britt.....	178	Saarti Jarmo	43, 66
Onyebinama Colette O.	111	Sadownik Danuta	185
Oohira Mutsumi	128	Saeed Hashmi Farhana.....	69
Osareh Farideh	43	Saeed Ullah Jan Dr.	55
Osinska Veslava	69	Safley Ellen	166
Osinski Grzegorz	69	Sajida Mah Jabeen Dr.....	136, 159
Oulem Khedidja	119	Sakib Nazmus	61
		Sakr Shaimaa.....	187
P		Salaz Alicia.....	30
Pacetti-Donelson Vandy	80	Salazar-Robles Sergio	99
Páez Verónica	93, 94	Salemian Fardin.....	70
Pakenham-Walsh Neil	18, 62	Salisbury Lutishoor.....	158
Papík Richard	113	Samanian Mosayyeb	98
Parabhoi Lambodara	108	Sanches Tatiana	95, 125
Pasquini Laura A.	39	Sarah Maka Nakayima	84
Patregnani Valeria	185	Sato Kazuki.....	183
Perera Kamani	138	Schlembach Mary C.....	177
Peterman Dana.....	50, 137	Schultz Samuel	104
Petrovic Vera	186	Schultz-Jones Barbara	39, 63
Plch Lukáš	41	Scott Valerie.....	37
Plemnek Alexander.....	153	Segall Phil	152
Pöldaas Mai	99	Shafer Sharon.....	50, 137
Potisek Eva.....	112	Shaibu Ameh Godfrey	61
Punyawardena W.	124	Shen Zhiyong.....	174
Pusterla Laura.....	114	Shu Fang.....	149
		Siamak Marzieh.....	125
Q		Silva América.....	79
Qiao Shan	174	Simona Maria Antonescu Dr.	65
		Siso-Calvo Brenda	123, 151
R		Skiadas Christos H.	96
Radó Rita	57	Sluga Marjetka	112
Radolović Debora	157	Smailagic Jelena	186
Rahma Alkharousi Dr.....	142	Sohair Wastawy Dr.....	1
Ramos-Eclevia Marian	179, 181	Sokolova Natalia	153
Ranaweera Prasanna	138	Solano Gabriela	99
Reberg Mikael.....	68	Špiranec Sonja.....	131
Renato Rocha Souza Dr.	2	Stalone Buwule Robert	170
Repiso Rafael	100	Stojanović Aleksandar	192
Reynolds Sue	151	Stroud Adam	54
Ribeiro Eduardo F.	129	Sturma Madeleine	142
Ridolfi Camille.....	185	Sunaga Kazuyuki.....	82
Rintamäki Katri	73	Syeda Hina Batool Dr.	27
Rocha Souza Renato	51	Synyakova Dilyara A.	23
Rodrigo Díaz Espinosa Javier	93, 94	Szalach Adam	162
Rodrigues Barbosa Ricardo.....	92	Szulc Jolanta.....	139
Rosa Kathy	47		

T

Tabacaru Simona	192
Takeuchi Kiichi	157
Tibor Koltay Dr.....	125
Toivonen Leena	185
Tomas Foltyn Mgr.....	116
Toni Franco	77
Townsend Kerry.....	152
Trianti Alexandra	104
Trivedi Kruti	116
Truccolo Ivana	101
Trujillo Sánchez Eduardo	93, 94
Tsuji Keita	161, 183
Tuand Krizia	92
Tuerlinckx Veerle.....	92
Turner Ben	157
Tzombatzaki Iro.....	104

U

Upson Matt.....	54
Uwazie Anyanwu Emmanuel.....	90

V

Valadares Cendón Beatriz	32, 111
Verbeke Demmy.....	169
Víchová Eva.....	163
Villagran Michele A. L.	163
Vinita Jain Dr.....	33
Vinzon Minette R.	48

Vouvaki-Manousaki Christina	54
Vovk Damjana	112
Vraimaki Eftichia	42

W

Weare, Jr. William H.	68, 145
Welsh Teresa S.....	55, 180
Wentzell Britanie	61
White Gary W.....	75
Wieland Martin	100
Wierzbicki Artur	119
Wijetunge Pradeepa	87
Wiley Christie	131
Wu Ming.....	173

Y

Yannoukakou Aikaterini	76
Yéssica Caudillo Ruiz Dora.....	66
Yu Liu.....	149

Z

Zahedi Nooghabi Mahdi.....	10, 12, 33
Zargaryan Tatev	53
Zbiejczuk Suchá Ladislava	163
Žďárská Kateřina	113
Zedda Monica	46
Zhang Yao.....	174
Zhiping Yang.....	149
Zimina Ekaterina I.	23
Zou Mengjie	28